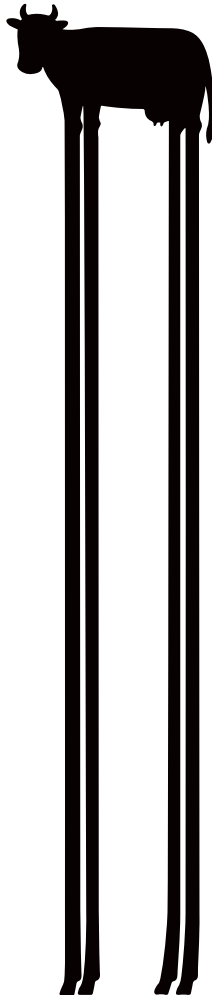


Playful Pedagogies

Climate Change as a Game

edited by Laura Cipriani



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Climate Change as a Game

TU Delft | OPEN Publishing

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Text was edited and written by Laura Cipriani.

Graphic Layout

Laura Cipriani with Jaming Huang.

Keywords

Playful pedagogies, children (co)design, climate change game.

Published by

TU Delft OPEN Publishing. A printed version of this work was published by LetteraVentidue in October 2025.

DOI <https://doi.org/10.59490/mt.266>

ISBN: 978-94-6518-399-2

October 2026

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The Electronic Version of this Book is Available at

<https://books.open.tudelft.nl>

Cover Image

Image by Jaming Huang and Laura Cipriani, 2025.

Funder Information

This publication was made possible with funding from the National Education Research Organisation (NRO *Nationaal Regieorgaan Onderwijsonderzoek*) | Project number 40.5.23865.022

Comenius Program 2023-2025 | *Climate Change as a Game*.

(Co)Designing with Children the Landscape of the Future by Laura Cipriani



No conflict of interest to disclose.

Data Access Statement

Existing data: this study brought together existing research data subject to license restrictions from a number of different sources. Full details are available in the reference sections of each chapter of this book.

Peer-review Statement

This book has been peer reviewed. The peer review was open. The editor and the Publisher would like to thank the reviewers for their time and effort: Maria Villalobos Hernandez and Arian Heidari Afshari.

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Figure 1 | The cow with long legs.
A detail of *Golden Spiral of Evolution* project.
Photograph by Fabiana Toni, 2025.

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Figure 2 | A detail of *Golden Spiral of Evolution* project. Photograph by Fabiana Toni, 2025.

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Figure 3 | The final onsite installation play with children. Photograph by Xuejing He, 2024.

Acknowledgements

Playful Pedagogies

Laura Cipriani

This book is the result of the Comenius Program, the Netherlands' top award for educational innovations, which I was honored to receive in 2023. This grant enabled me to develop an experimental elective course at TU Delft's Faculty of Architecture and the Built Environment, offered to master's students studying landscape architecture, architecture, and urbanism during the 2023-24 academic year. It was an intensive, transdisciplinary design program that included both international and Dutch-speaking students, as well as primary school children from Groen van Prinsterer Primary School in Voorburg, the Netherlands. The project aimed to teach and involve younger generations in climate change issues through various forms of play. Students explored the rural, peri-urban landscape of Delftse Hout, engaging children in (co)designing future landscapes while applying concepts of play, design, and climate change.

I sincerely thank all the students—Xuejing He, Jiaming Huang, Sara van Keulen, Olivia Lensen, Fenne Manshande, Melissa Meertens, Janaina C.M. Schmittgens, Qianlin Xu, and Yuhang Zhai—for their vital contributions that made this project possible. Thanks to Groen van Prinsterer Primary School and its teacher, Florianne van Zandvoort,

for participating in this educational experiment. I also thank my student assistants, Sari Naito and Jaming Huang, for their help with the images, as well as Bob de Boer and Sari Naito for preparing the permanent installation.

I want to thank the generous contributors—Maguelonne Déjeant-Pons, Mathieu Gielen, Alison Goss, Roberto Pasini, Valerio Perna, and Belinda Tato—for their inspiring presentations at the *The Power of Play* conference and chapters of this book. Thanks to Josje Duyndam for participating in the project and allowing us to display the work at the Stiltegoed installation site. Special thanks to Frederique Belliard and Just de Leeuwe at TU Delft Open Publishing for their guidance and essential advice. I am grateful to the editorial team for overseeing the peer review process and to reviewers Maria Villalobos Hernandez and Arian Heidari Afshari for their insights, which enriched this work. Thanks also to LetteraVentidue for publishing the book in print with such excellent quality.

This project was funded by the Comenius Program 2023-2025 from NRO (Nationaal Regieorgaan Onderwijsonderzoek), which provided financial and organizational support throughout the entire project timeline. I sincerely thank everyone involved for this exceptional opportunity.

To everyone who shared their passion and expertise along the way—Remon Rooij, Roberto Cavallo, Marcel Bilow, Fabiana Toni, Eric Luiten, Michiel Pouderoijen, Sigwela Augustin, Meike Haan, Ben Cornelisse, Anita van Oosten, Saskia Postema—thank you.

Introduction

The Art and Science of Play

Laura Cipriani

The landscapes of tomorrow will not be static. The generations entering the world today will inherit not merely a planet but a persistent state of instability and uncertainty. Climate change, urban expansion, and ecological transformations will become integral to daily life, rather than isolated crises or occasional disruptions (Figure 4).

Eco-anxiety—an enduring concern about climate precarity—primarily afflicts young people (Ojala, 2012; Hickman et al., 2021; Hickman, 2024).

In this context, education emerges not simply as a technical challenge but as an anthropological imperative: how can we prepare youth to face these realities? What mindset suits a world in flux? What constellation of thought, emotion, and action can nurture individuals able to navigate uncertainty without succumbing to it? How can we enrich their knowledge and expand their capacity for imagination, resilience, and joy?

This book is my attempt to answer these questions. It presents the outcomes of the Comenius Fellowship for didactical and pedagogical innovation. For me, the fellowship was more than a professional opportunity; it was a chance to experiment with pedagogy during a time when I felt our educational methods were

Greenhouse Gas Emissions
Million tonnes / Mt

240 Mt
200 Mt
160 Mt
120 Mt
80 Mt
40 Mt
0 Mt

1900 1920 1940 1960 1980

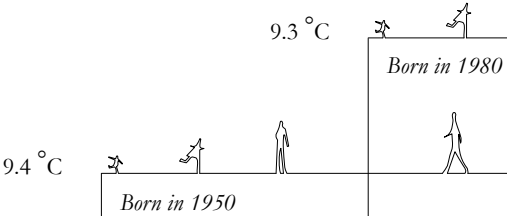
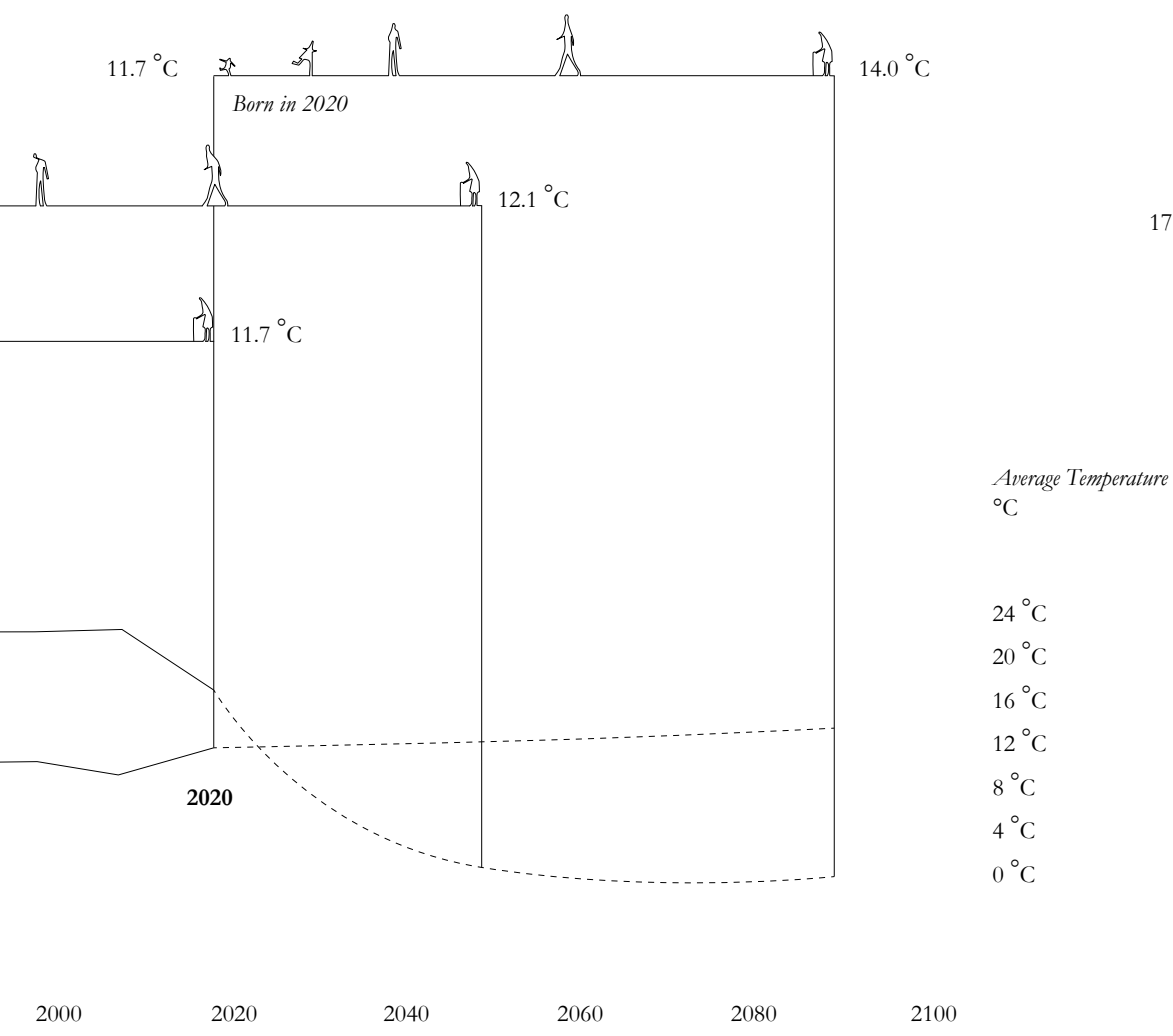


Figure 4 | The life of a child born in 1950, 1980, and 2020 in relation to temperature and greenhouse gas emissions in the Netherlands.
Data sources from Royal Netherlands Meteorological Institute, 2024; Emissions Database for Global Atmospheric Research, 2024. Image by Sari Naito, Laura Cipriani, 2004.



inadequate for the crises at hand. I wanted to go beyond merely transmitting information about climate change. Too often, I had seen education focus narrowly on rational knowledge, on threats and catastrophe, leaving students with a sense of powerlessness. I aimed to invite students into a collective process of action, reflection, and play—one that would foster not only critical understanding but also hope, creativity, and an emotional connection to nature. The fellowship offered the space to build a framework where science and art, reason and emotion, could coexist.

The subtitle of this book, *Climate Change as a Game*, intentionally presents a paradox. The transition is neither a game nor should it be treated as one: it is an urgent, profoundly serious challenge. Yet what if we reconceptualized our approach with optimism and practicality? Could such a shift in mindset inspire proactive engagement? Play does not diminish complexity; rather, it renders it tangible. Too often, education confines itself to transmitting abstract knowledge, leaving learners disoriented or powerless. Play, however, introduces a performative dimension: participants do not merely contemplate but act; they do not solely observe but engage. Play demands presence: it is immersive, participatory, embodied, and vibrant. Those who play see, feel, and imagine. In the context of the climate crisis, play enables us to experience the issue not as a distant abstraction but as a shared reality, where individual and collective creativity can effect tangible change. Involving students in a collective process of action, reflection, and playful

Introduction

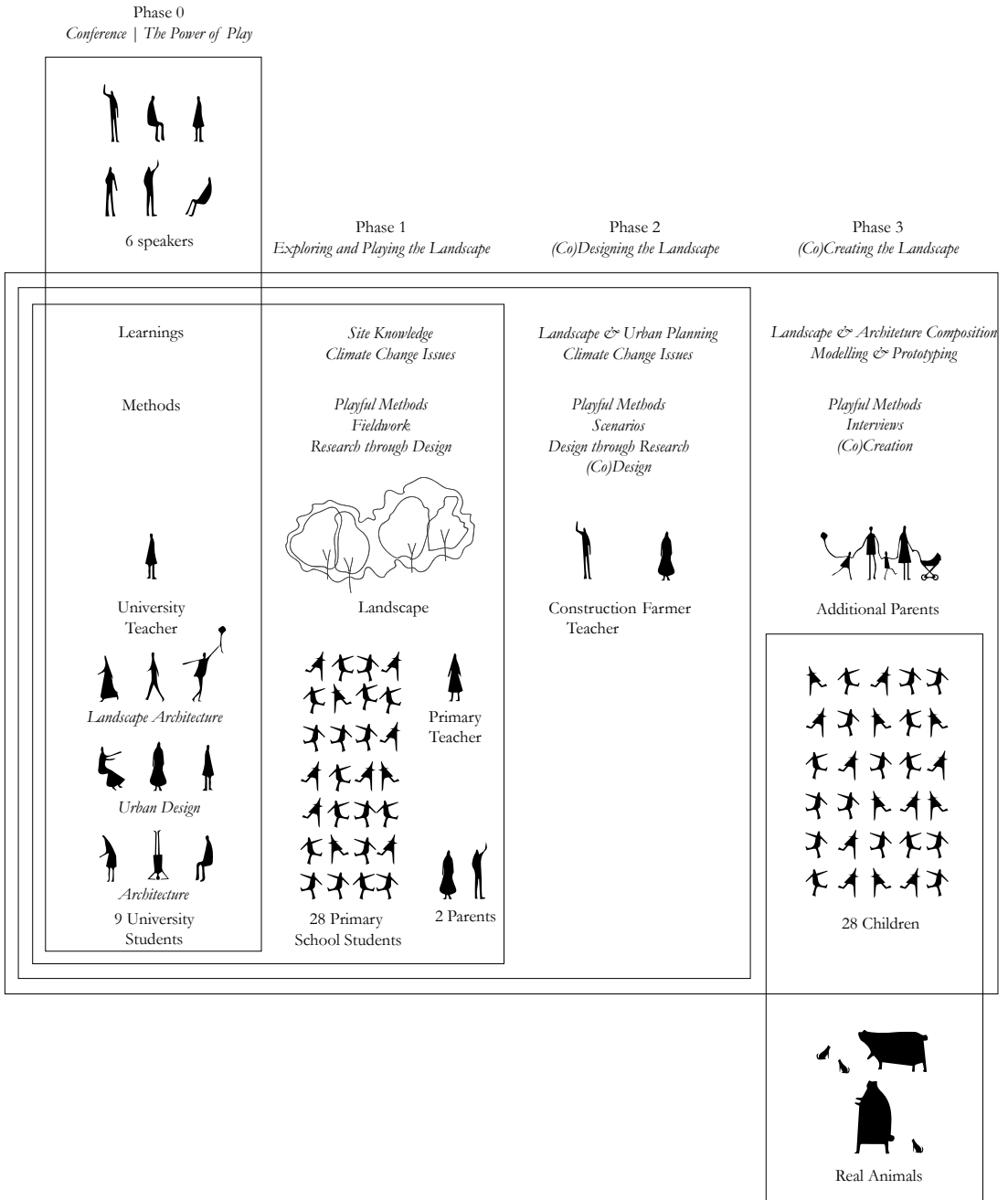


Figure 5 | The four phases of the course involve various participants, including university students, children, teachers, guest speakers, farmers, parents, and animals.
Image by Sari Naito, Laura Cipriani, 2004.

experimentation fosters hope, innovation, and a profound emotional bond with the natural world.

Play became the central focus of this experiment. In the context of climate change, play allowed students to experience the problem not as an abstract crisis but as a shared reality in which their creativity could make a difference. In practice, this meant asking students in landscape architecture, urban design, and architecture to explore the rural and peri-urban landscape of Delftse Hout in the Netherlands, a place where soil changes contributed to climate change—covering its history, present, and potential future. They were then encouraged to blend the themes of play, design, and climate change, resulting in the collaborative creation of an outdoor climate play/art installation with children (Figure 3). Observing this process, I saw my students step into new roles. They were no longer just learners; they became facilitators, guides, and what I call *agents of change*. This shift was profound—not only for them but also for me as their instructor. One of the most rewarding moments was witnessing them realize their ability to take action in the world, not just study or illustrate it.

I designed this course out of both frustration and hope. I was frustrated because I often saw climate education framed in ways that left students feeling overwhelmed—emphasizing threats and catastrophes rather than opportunities and renewal. I was frustrated because participatory methods, though common in professional planning, rarely included the voices of young people. And I was frustrated because education

itself seemed skewed toward rational analysis, leaving little room for emotional engagement. Yet I was also hopeful—hopeful that by reimagining pedagogy, I could create a different kind of learning space, one where students might rediscover their connection with nature and approach climate futures with optimism. These observations convinced me that a new approach was necessary—one that would engage head, heart, and hands alike.

Framing the climate transition as a *game/play* became a powerful innovation. I noticed how quickly students' attitudes shifted when we discussed playfulness, possibility, and participation. Involving children as (co)designers was equally transformative. For the first time, many of my students realized that climate change is not a generational problem but a shared one—that learning to collaborate across ages could itself be part of the solution. I saw how quickly their perspectives expanded when they realized they were no longer working only for themselves but with and for others. These moments affirmed for me that the role of the educator is not simply to provide knowledge but to create conditions in which new forms of collective learning can unfold.

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The theoretical foundations of this course come from my fascination with the words 'play' and 'game.' Their etymologies revealed something important to me. Play originates from the Old English '*pleg(i)an*' ('to exercise') and '*plega*' ('brisk movement'), highlighting spontaneity, joy, and movement similar to dance. Johan Huizinga, in *Homo Ludens* (1938), describes play as a

fundamental behavior of culture, observable in humans, animals, and, as Stefano Mancuso has more recently noted, even in plants. For example, young sunflowers seem to ‘dance’ as they turn toward the sun in early stages of their lives. Conversely, game comes from the Old English ‘*gamen*’ (‘amusement,’ ‘fun’), signifying structure, rules, and goals. As I reflected on these dualities, I realized that this distinction revealed something essential: education must embrace both aspects—the emotional dance of play and the rational structure of games—if it aims to prepare students for the climate transition. This insight has since shaped my teaching philosophy.

As the course progressed, I observed students engaging in what I came to describe as three levels of knowledge inspired by Rudolf Steiner’s writings: *thinking*, *feeling*, and *willing* (Steiner, 1915). They learned theories; they experienced emotions; they acted with their hands and bodies. By working directly with landscapes and interacting with children and living creatures, they developed not only knowledge but also empathy and a sense of responsibility. I felt that this attitude resonated with the ancient idea of the *anima mundi*, the soul of the world, and of Comenius’ pansophic principle of teaching ‘*all to all, from every point of view*’ (Comenius, 1896, p. 156).⁷ Both guided my belief that nature itself must serve as an educator and that pedagogy should be universal, relational, and holistic. These philosophical anchors gave me confidence that we were not simply playing but recovering something essential about learning itself: that it must be rooted in nature, in experience, and in connection.

The outcomes surpassed even my most optimistic expectations. What began as an experiment evolved into a cycle of collaboration, connecting children, university students, parents, teachers, and farmers. I observed students gain confidence not only as designers but also as educators. They learned how to communicate, facilitate, and inspire. Their projects shifted from focusing solely on technical solutions to building relationships—with people, landscapes, and futures. They refined participatory methods, improved their teaching skills, and developed new relational capacities. Most notably, they started approaching climate issues not just seriously but with joy. For me, this was perhaps the most significant result: witnessing hope and play return to a field so often clouded by despair.

This also transformed my role as a teacher. I started to see myself less as an instructor and more as a director of a communal play. My job was to set the stage, rehearse the possibilities, and then step back and let the play unfold. When the curtain rose, it was not my voice but theirs—and the children's voices—that filled the space. This change was both humbling and liberating. I realized that pedagogy can also evolve if we allow ourselves to let go of control and embrace uncertainty.

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Shakespeare's words often came to mind: '*All the world's a stage, and all the men and women merely players*' (Shakespeare, 1599).⁷ In our case, the stage was the landscape, the script was co-written, and the performance was shared. What I learned through this fellowship is that pedagogy can be more than mere instruction: it can be a form of collective

play, a *dance* between *science* and *art*, rationality and emotion, structure and spontaneity. And in that dance, I believe, lies the potential to prepare new generations not just to endure climate change but to reimagine and reshape the futures it will bring.

Book Structure

This volume is organized around the phases of the Comenius course (Figure 5) and divided into two main sections.

Part I presents the proceedings of *The Power of Play* conference, which inaugurated the course (Figure 6). Conceived as an interdisciplinary seminar, the conference highlighted key themes of the project, emphasizing the broader relevance of play in relation to grammar, educational theories, design strategies, and (co)design practices. It also examined how engaging younger generations might influence the shifting landscape of climate transition. Here, play and games transcend leisure—they become epistemic and pedagogical tools: means through which students and children acquire knowledge, explore alternative perspectives, and collaboratively envision possible futures. The focus is not on playgrounds or pre-existing games but on creating a ‘*ground for play*’—a conceptual and practical framework where imagination, (co)design, and (co)creation foster immersion in the landscape and raise awareness of its ongoing transformations under climate change. From this vantage point, play and games are regarded as ‘*designed experiences*’: active participation forms that contrast with passive traditional education. By assuming diverse roles and perspectives, participants evoke emotions that



Figure 6 | *The Power of Play* conference.
Photograph by Marcel Bilow, 2024.

deepen awareness, refine visions of the future, and inform decision-making. The essays in Part I articulate these dimensions.

Part II centers on the 2024 Comenius course at TU Delft, structured into three phases. Each phase was guided by a different student group—landscape architecture students (Phase 1), urban design students (Phase 2), and architecture students (Phase 3). These stages included workshops with children to incorporate their viewpoints into the design process.

The initial phase—*Exploring and Playing the Landscape*—focused on students and children engaging with the landscape through play.

The second phase—*(Co)Designing the Landscape*—involved collaborative workshops where students, children, and local stakeholders (co)designed a landscape installation, utilizing play as both process and method.

In the final phase—*(Co)Creating the Landscape*—students collaboratively implemented the installation on-site, culminating in a performative dance with the landscape, where play functioned as both method and outcome.

The book concludes with the transformation of the temporary installation into a permanent feature within the rural landscape (Figures 1-2-7). Inspired by the entire Comenius process, the final piece features a golden spiral—a logarithmic Fibonacci sequence based on the golden ratio.

This shape, observed at various scales in natural and cosmic systems—from seashells to galaxies—serves as a metaphor for harmony, continuity, evolution, and the enduring connection between nature, living systems, design, and play.



Figure 7 | A detail of *Golden Spiral of Evolution* project. Photograph by Fabiana Toni, 2025.

References

- Comenius, J. A. (1896). *The great didactic of John Amos Comenius* (M. W. Keatinge, Ed. & Trans.). Adam & Charles Black. (Original work published 1657)
- Emissions Database for Global Atmospheric Research. (2024). *GHG emissions of all world countries*. European Commission.
https://edgar.jrc.ec.europa.eu/report_2025
- Hickman, C. (2024). Eco-anxiety in children and young people—A rational response, irreconcilable despair, or both? *The Psychoanalytic Study of the Child*, 77(1), 356–368.
<https://doi.org/10.1080/00797308.2023.2287381>
- Hickman, C., Marks, E., Pihkala, P., Clayton, S., Lewandowski, R. E., Mayall, E. E., Wray, B., Mellor, C., & Van Susteren, L. (2021). Climate anxiety in children and young people and their beliefs about government responses to climate change: A global survey. *The Lancet Planetary Health*, 5(12), e863–e873.
[https://doi.org/10.1016/S2542-5196\(21\)00278-3](https://doi.org/10.1016/S2542-5196(21)00278-3)
- Huizinga, J. (1949). *Homo ludens: A study of the play-element in culture*. Routledge & Kegan Paul. (Original work published 1938)
- Ojala, M. (2012). Regulating worry, promoting hope: How do children, adolescents, and young adults cope with climate change? *International Journal of Environmental and Science Education*, 7(4), 537–561.
- Royal Netherlands Meteorological Institute. (2024). *KNMI data platform*.
<https://dataplatfom.knmi.nl/>
- Shakespeare, W. (1997). All the world's a stage (*As you like it*, Act II, Scene VII) [Poem]. Academy of American Poets.
<https://poets.org/poem/you-it-act-ii-scene-vii-all-worlds-stage> (Original work published 1599)
- Steiner, R. (1915, August 1). *Harmonizing thinking, feeling and willing* (GA 162) [Lecture transcript]. Rudolf Steiner Archive.
<https://rsarchive.org/Lectures/GA162/English/TS1989/19150801p01.html>





Figure 8 | Image by Paul Klee,
Red Balloon, 1922

Part I

The Power of Play



Figure 9 | The conference manifesto featured Paul Klee's *Red Balloon* painting. Image by Laura Cipriani, 2024.

1 | The Conference

The Power of Play

Laura Cipriani

In April 2024, the transdisciplinary seminar *The Power of Play* was held at TU Delft's Faculty of Architecture and the Built Environment (Figures 8-9). Designed both as an introduction and a reflection on the upcoming Comenius Fellowship course, the seminar aimed to explore the broader pedagogical and creative potential of play—its grammar, emotional intelligence, and capacity to inform design strategies and (co)design practices. Central to the discussion was a simple yet profound question: how might engaging younger generations through play change the way we envision and shape landscapes in a changing climate? What are the pedagogical implications? The diversity of speakers—architects, landscape architects, pedagogues, and even a legal scholar—offered a chorus of perspectives on the educational power of play (Figures 10-12). Their discussions moved fluidly between theory and practice, revealing how play can evoke emotion, nurture empathy, and cultivate new forms of ecological awareness. Throughout these dialogues, the landscape itself appeared not only as a subject of design but as an active participant in learning—a living classroom where curiosity, experimentation, and care intertwine. The seminar unfolded as a constellation of ideas.

My opening essay examined ‘play’ and ‘game’ through the lens of landscape pedagogies, placing both historic and contemporary ludic initiatives within a belief that outdoor play—in and with landscapes—extends far beyond the limits of structured playgrounds. It is a form of learning rooted in freedom, imagination, and the subtle interaction between body and landscape.

Valerio Perna’s contribution showed how ludic practices can reshape the urban environment. By encouraging playful acts of appropriation, they reveal hidden structures and assign new meanings to familiar spaces. In this way, play becomes not just a pastime but a mindset—a critical and creative approach to the city, allowing architects, planners, and citizens alike to reimagine their shared environments.

From a pedagogical perspective, Alison Goss explored how children’s autonomy, spatial thinking, and the temporal rhythm of learning are influenced by the environments we create for them. Her reflection emphasized the delicate balance between guidance and freedom, between the educator’s role and the learner’s agency—an equilibrium at the heart of any educational approach that aims to foster imagination alongside understanding.

Expanding this dialogue into policy and collective action, Maguelonne Déjeant-Pons presented the Council of Europe’s initiatives in implementing the educational dimension of the European Landscape Convention. Through legislative frameworks and participatory programs, these efforts motivate teachers and primary school students to critically explore the environmental, cultural, and social meanings of landscapes,



Figure 10 | The conference speakers.
Photograph by Marcel Bilow, 2024.

connecting play with civic responsibility and ecological awareness.

Belinda Tato's presentation, which unfortunately isn't included in the following chapters, highlighted Ecosistema Urbano's creative methods with children, such as the *Exuma Origami Garden of Dreams*. Playful tools and drawings are an essential part of participation, helping to (co)create the landscape with and for younger generations. The seminar ended with Roberto Pasini's vivid documentation of a research-by-design project in Mexico's Sierra Madre Oriental. There, an ecological trail populated with playful landscape installations encouraged children to explore the biodiversity of the matorral shrubland through tactile and imaginative experiences. Led by artists and activists, their interactions with the land became both artistic expression and environmental awareness—a choreography of learning driven by wonder.

To conclude the day, I invited participants to join a simple exercise called *The Dot of the Changing Landscapes*, a reprise of a 1970s game by landscape architect Bernard Lassus. Each attendee received a blank white sheet marked with a single green dot and was asked to draw a landscape shaped by climate change (Figure 11). What emerged was a tapestry of worlds: soils alive with bacteria, seas topped by turbines, suns glowing above forests and fish. Through these small acts of imagination, we saw how the climate crisis, often presented in data and despair, could be reinterpreted through emotion, creativity, and hope.

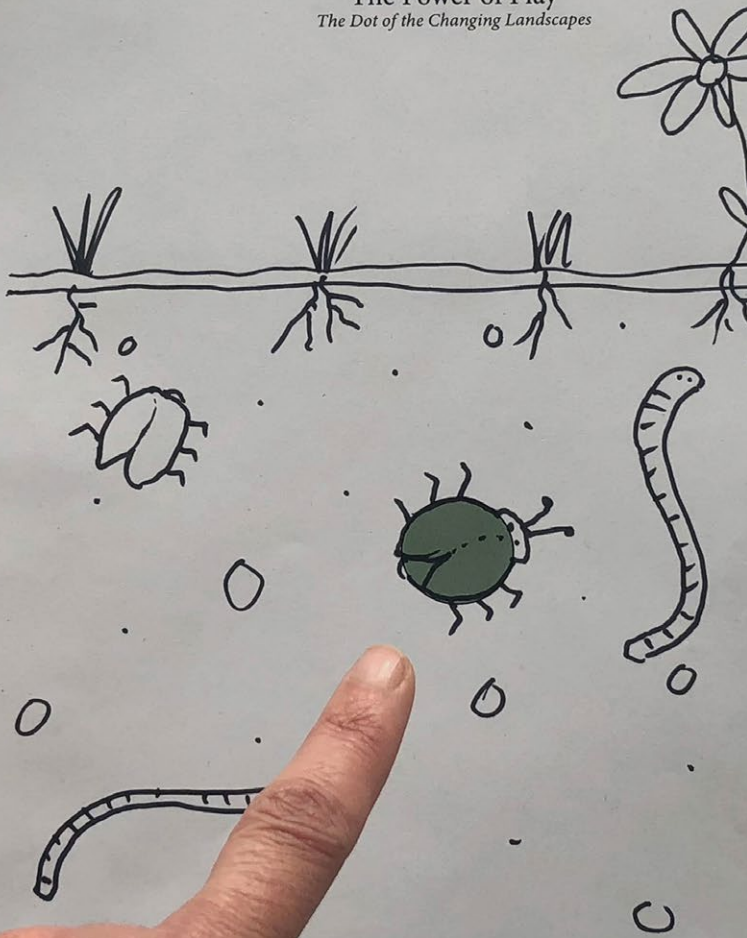
The same exercise was later repeated with children and students during a second workshop, and all their drawings—the many dots of change—were

types of change?
plants, animals, bacteria, nature, etc.)
sketch.

Instructions | What is crucial for the landscapes of change?
Make a drawing on climate change and landscape topics (water, soil, plants, animals, bacteria, nature, etc.) that necessarily includes the dot in your sketch.

The Power of Play

The Dot of the Changing Landscapes



types of change?
plants, animals, bacteria, nature, etc.)
sketch.

Instructions | What is crucial for the landscapes of change?
Make a drawing on climate change and landscape topics (water, soil, plants, animals, bacteria, nature, etc.) that necessarily includes the dot in your sketch.



Figure 12 | Audience at the conference.
Photograph by Marcel Bilow, 2024.

displayed at the final seminar. Together, they formed a collective landscape of imagination—a visual dialogue across generations. Each dot, each line, each envisioned world reflected the same quiet belief: that play, in its gentlest form, remains one of our most powerful tools for learning, reimagining, and dreaming of a new shared Earth.



Figure 13 | *Children's Games* by
Pieter Bruegel the Elder, 1560. Photograph by
Kunsthistorisches Museum, Vienna.

1.1 | Ludic Pedagogies

Landscape as the ‘Ground’ for Play

Laura Cipriani

This chapter provides background for the Comenius course, focusing on didactical and pedagogical innovation—an invitation to collaborate in addressing the climate transition by encouraging direct interactions with nature and fostering positive attitudes, emotional awareness, and artistic sensitivity. Specifically, this chapter revisits the connection between play and landscape education, highlighting their potential as transformative tools in both formal and informal learning environments. Through an analysis of various projects that blend play with natural environments, the chapter emphasizes ‘designed experiences’ where learning occurs through embodied action and participatory engagement, rather than passive absorption of information typical of traditional classrooms. Drawing on both historical and contemporary ludic initiatives where the landscape itself serves as the ‘ground’ for play, the chapter argues that outdoor play should extend beyond pre-designed playgrounds. Instead, it should act as a way to foster imagination, creativity, and freedom, positioning play as a vital practice for rethinking the roles of landscapes in education and ecological awareness.

Landscape as the ‘Ground’ for Play

The relationship between play and landscape has been examined across various fields, including education, cultural geography, philosophy, and landscape architecture. Thinkers such as Johan Huizinga (*Homo Ludens*, 1938) and Roger Caillois (*Man, Play, and Games*, 1961) have emphasized play as a fundamental and universal human activity that influences culture, shapes meaning, and transforms environments. Recently, researchers in environmental psychology and childhood studies have shown how outdoor play supports cognitive and social development while also increasing ecological awareness (Lester and Maudsley, 2007; Gill, 2014). In this context, the landscape is seen not as a passive background but as an active medium in which play occurs, shaping experiences of freedom, creativity, and belonging.

Various projects show how play and nature can be combined to promote experiential learning. These designed experiences demonstrate that learners gain deeper and longer-lasting knowledge when they actively interact with their environment instead of passively receiving information, as seen in traditional education. Outdoor play, integrated into the landscape, requires approaches that go beyond conventional playgrounds, encouraging open-ended opportunities for discovery, independence, and imaginative exploration.

Historical records provide many examples where the landscape itself served as a site of playful activity. Pieter Bruegel the Elder’s famous painting *Children’s Games* vividly illustrates this idea, depicting over ninety different games occurring across urban and peri-urban areas (Figure 13). The work highlights that play not only occupies space but also shapes it, with the landscape functioning as an active and vital part of the playful experience.

In landscape architecture, Carl Theodor Sørensen is recognized for his dedication to designing environments that encourage lively interaction through geometric landscape composition. His *Musical Gardens* (1954–1983) in Herning, Denmark, exemplify formal experimentation; however, equally significant—though less acknowledged—is his pioneering work in creating the ‘*junk playground*’ at the end of World War II. Designed as unstructured terrain,

the junk playground allowed children to freely manipulate natural materials, such as soil and mud (Papastergiou, 2020). The *Emdrup Adventure Playground*, founded in Copenhagen in 1945, is still one of the earliest and most influential examples of this approach, providing an environment without strict rules where children's imaginations guide their play with the landscape. Similar ideas are also found in the work of Isamu Noguchi, whose surreal and abstract landscapes, including the *Contoured Playground* (1941), aimed to inspire imaginative engagement (Witcher et al., 2013). By avoiding prescriptive functions, Noguchi's sculptural forms encouraged participants to create their own ways of interacting, emphasizing non-directive play and the creative potential of open-ended design.

At the city level, Aldo van Eyck's interventions in postwar Amsterdam exemplify a significant extension of this philosophy. By transforming marginal and underutilized urban spaces into playful environments, van Eyck reshaped how children interact with the city. His bottom-up interventions—though modest in size—are part of a broader urban renewal strategy that promotes play as a way to foster community involvement and rethink public life. Similar ideas appeared in avant-garde urban theory. Guy Debord's *The Naked City* reimaged the city with playful and emotional maps, using collage techniques that resemble children's drawings. Likewise, Constant Nieuwenhuys's utopian idea of *New Babylon* envisioned a post-industrial city liberated from repetitive labor. In this future, automation would allow humans to focus on creativity and play, embodying Huizinga's influential concept of *homo ludens*. The landscape is the 'ground' on which to set the play, not a playground.

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Landscape Play Pedagogies

Current and future generations will encounter a vastly different world, depending on actions taken now and in the near future to confront the climate crisis (IPCC, 2023). The educational potential of play as a method to address today's ecological challenges—especially climate change—could assist younger generations in preparing for and acting during the climate transition, yet it remains underexplored

in landscape architecture and academic theory. Research has traditionally concentrated on how children perceive landscapes but has seldom acknowledged their capacity to act as active agents in developing ecological awareness or enhancing environmental resilience. This gap emphasizes the need for renewed focus on play as a formative practice that not only shapes children's relationship with the natural world but also fosters imaginative and collective responses to the climate crisis. Although direct scholarly connections between climate change and play within landscape contexts are limited, the broader concept of engaging with nature through play has long been part of educational practice. One of the earliest and most influential figures in this discourse was John Amos Comenius, widely recognized as a pioneer of modern pedagogy. Comenius introduced innovations such as illustrated textbooks in native languages to make knowledge more accessible to children. His *Orbis Sensualium Pictus* (1658)—often considered the first picture book for children—depicted the Earthly and Heavenly spheres alongside animals, plants, and games. By emphasizing sensory experiences—visual, auditory, and tactile—Comenius made imagination and embodied perception central to learning, laying the groundwork for a pedagogy where play and landscape intersect. As Comenius famously wrote: *'Let it be given to children into their hands to delight themselves withal as they please, with the sight of the pictures, and making them as familiar to themselves as may be, and that even at home before they put to school. (...) Thus at last this school would indeed become a school of things obvious to the senses, and an entrance to the school intellectual. But enough: Let us come to the thing it self'* (Comenius, 1887 [1658], p. xviii).

Comenius's pedagogical philosophy was based on the belief that knowledge comes from nature, seen as the expression of divine order. At the heart of this view was his pansophic principle—*'Omnes, omnia, omnino'* ('to all, about all things, in all ways') (Comenius, 1896, p. 156)—which conveyed the idea of universal access to knowledge. This belief aligns with the Platonic concept of *anima mundi*, or the world soul, which posits that the cosmos is filled with an animating spirit. These cosmological ideas were vividly depicted in the engravings of Robert Fludd, whose *Utriusque Cosmi Maioris Scilicet et Minoris Metaphysica, Physica Atque Technica*

Historia (1617-1618) portrayed the universe as a living being animated by divine intelligence (Fludd, 1617).

Similar ideas influenced Maria Montessori's educational philosophy. In *The Discovery of the Child* (2004 [1948]; see also Montessori et al. 2013), Montessori emphasized the vital role of nature in children's emotional, cognitive, and moral development. For her, engaging with the natural world fostered what she called *Cosmic Education*—an understanding of the interconnectedness of all living things and elemental forces, such as sunlight, water, and air. To support this understanding, she promoted gardens as learning spaces where children could directly interact with natural processes. Montessori also warned about the alienation caused by modern urban life, which greatly restricted children's opportunities for close contact with nature. Activities like gardening at the *Casa dei Bambini*, the 'House of the Children,' were designed to combat this disconnection, encouraging a genuine sense of harmony with the environment. As she observed: '*At the present time, however, and in the circumstances of modern society, children live very far from nature and have few opportunities of coming into intimate contact with, or having any direct experience of it. (...) The most important thing to do is to free the child, if possible, from the ties which keep him isolated in the artificial life of a city*' (Montessori, 2004, p. 76).

Parallel concerns were raised by Colin Ward in *The Child in the City* (1978), where he argued that urban spaces must be understood from a child's perspective. Ward emphasized the importance of play, appropriation, and imagination in shaping children's experiences of the city, pointing out the significance of the '*floorscape*'—the street-level ground—as a key medium of perception. As he noted: '*The younger the child the closer his eye-level is to the ground, and this is one of the reasons why the floorscape (...) is very much more significant for a child*' (Ward, 1978, p. 22). In *The Child in the Country* (1990), Ward further argued that rural landscapes offer even more enriching opportunities for children to develop embodied knowledge of their surroundings.

This perspective aligns with the work of Bruno Munari, whose artistic experiments demonstrated how play allows children to interpret the 'language of nature' through multisensory engagement (Munari 1940, 1971, 1995, 2004a,

2004b, 2004c, 2004d, 2004e, 2004f, 2005, 2007; Restelli 2019). From observing the colors of skies and rivers to tracing outlines of trees, flowers, and clouds, Munari's projects underscored the pedagogical value of creative interaction with natural forms.

Likewise, Bernard Lassus's playful experiments (Lassus, 1977a, 1977b)—such as the game *The Red Dots* (Lassus, 1977b)—where participants built landscapes from simple stimuli where people were asked to complete a page with a red dot on it—demonstrate the limitless potential of imagination to create new environmental meanings. A red dot on a piece of paper can open the doors to imaginary landscapes and gardens.

Radical pedagogical experiments of the 1960s and 1970s further strengthened the connection between play, landscape, and learning, especially in architecture schools (Colomina et al., 2022). At the Institute of Architecture in Valparaíso, Chile, Alberto Cruz and Godofredo Iommi launched *The Poetics of Drifts, Acts, and the Open City*, an experimental program where architectural exploration was conducted through playful practices. In Poland, the duo KwieKulik staged *A Game on Morel Hill*, a performative contest of movement and color, while in California, Anna and Lawrence Halprin organized interdisciplinary workshops in Driftwood Village using dance and movement to explore the environment. All their poetics were based on the aesthetic, kinesthetic, and ecological concept of what they called '*motations*,' which involved recording body movements in space for representation and gathering data about their environment (Clavel and Noûs, 2020). Although not solely aimed at children, these initiatives emphasized the educational value of embodied engagement with landscapes, culminating in Halprin's *Planetary Dance*—a collective performance that invoked elemental forces such as earth, water, air, and fire.

In recent years, projects such as Segni Mossi (Segni Mossi, 2025)—founded by Alessandro Lumare and Simona Lobefaro—have expanded this tradition by combining dance and drawing in participatory workshops. Their approach enables children and adults alike to explore their surroundings both emotionally and physically, fostering an experiential connection between the body, environment,



Figure 14 | What do I want to change? The participation process with children for the *Exuma Origami Garden of Dreams* in the Exuma Islands, Bahamas. Project and photograph by Ecosistema Urbano, 2014.

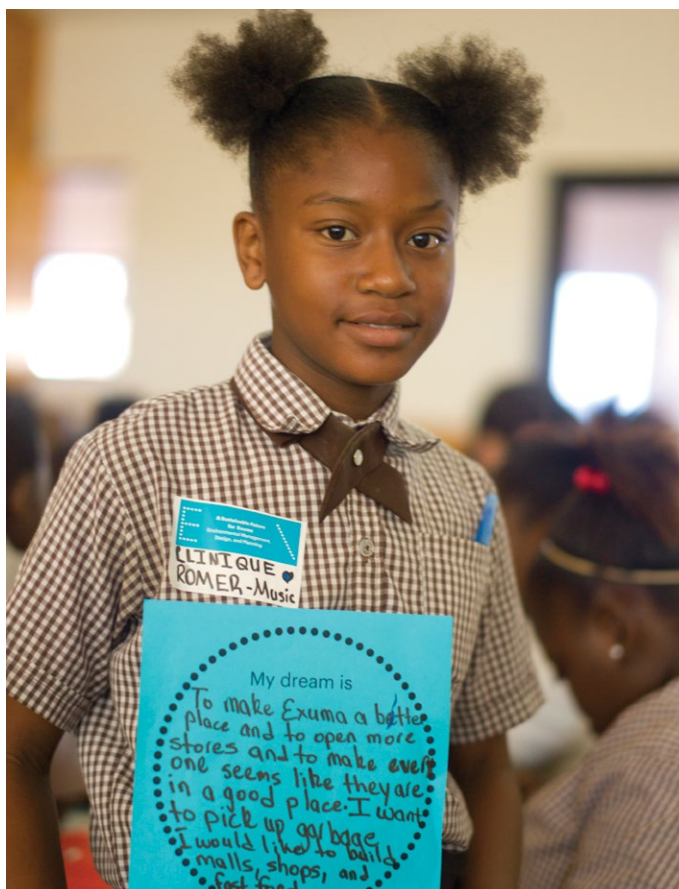


Figure 15 | What is my dream for Exuma Island? Blue and red sheets of paper were collected and used to create the *Exuma Origami Garden of Dreams* in the Bahamas. Project and photograph by Ecosistema Urbano, 2014.

and imagination.

Contemporary interest in climate-related games has further broadened this discussion. While many of these games focus on environmental themes, they often overlook treating the landscape itself as a central medium for ecological awareness or translating playful experiences into tangible spatial practices. Still, innovative projects are beginning to emerge. For example, *Symbiotic Matorral* (Pasini, 2019) aimed to raise children's ecological awareness through role-playing exercises inspired by Deleuze and Guattari's geophilosophy of 'becoming-animal.' By encouraging participants to 'hear like a rabbit,' 'smell like a bear,' or 'see like a coyote,' the project challenged anthropocentric assumptions and fostered empathetic encounters with biodiversity.

Similarly, Belinda Tato's vision for Exuma Island in the Bahamas—threatened by rising sea levels—highlighted children's imaginations as tools for envisioning alternative futures. In the *Exuma Origami Garden of Dreams* (Ecosistema Urbano, 2014), children inscribed their hopes on colored paper (Figures 14-15), which was then folded into origami flowers to form a collective installation (Figure 16).

Each petal expressed aspirations for renewal, symbolizing resilience and the transformative power of shared imagination. Other recent contributions have explored play as a form of collective design, though not always explicitly connected to landscapes or climate change (see Perna, 2020). Building on the European Landscape Convention, new scholarship emphasizes the importance of incorporating children's activities and ludic practices into landscape education, thereby fostering deeper affective and ecological connections (Council of Europe, 2021; Castiglioni, 2007, 2009, 2011).

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Conclusions

This chapter has aimed to demonstrate how play, when connected to the landscape, functions not only as a recreational activity but also as a vital educational tool with significant implications for education, urban design, and ecological awareness. Historical examples—from Comenius's sensory pedagogy to Montessori's *cosmic*



Figure 16 | *Exuma Origami Garden of Dreams*
at Exuma Islands in the Bahamas. Project and
photograph by Ecosistema Urbano, 2014.

education, from Sørensen's *junk playgrounds* to Noguchi's sculptural terrains—highlight a long-standing recognition of play as a means of developing imagination, creativity, and embodied knowledge. Meanwhile, recent initiatives, ranging from the artistic experiments of the 1960s and 1970s to contemporary projects addressing climate change, emphasize the ongoing importance of ludic practices in reshaping human relationships with their environments. Across these various contexts, a common theme emerges: play transforms the landscape into a stage for exploration, allowing people of all ages to see the world not as a static backdrop but as an active, creative partner in learning. This insight holds important implications for addressing today's ecological challenges. By fostering imagination, empathy, and collective creativity, play can help cultivate the attitudes necessary to confront the climate crisis—openness to uncertainty, sensitivity to interdependence, and the ability to envision different futures. In this way, landscape play pedagogies offer more than just an addition to traditional education; they provide a new perspective on how knowledge is created, shared, and experienced. They suggest that resilience against environmental change will come not only from technical skills or scientific knowledge but also from the imaginative capacities nurtured through playful engagement with the world around us. As Pablo Picasso told us: *'Every child is an artist. The problem is how to remain an artist once we grow up.'* To continue being artists of the world—to keep imagining, creating, and playing within and with the landscapes we inhabit—may be one of the most urgent pedagogical tasks of our time.

References

- Cailliois, R. (1961). *Man, play, and games*. University of Illinois Press.
- Castiglioni, B. (2007). Education on landscape: Theoretical and practical approaches in the frame of the European landscape convention. In S. Reinfried, Y. Schleicher, & A. Rempfler (Eds.), *Geographical views on education for sustainable development: Proceedings of the IGU-CCGE Conference, Lucerne, Switzerland, 29 July – 3 August 2007* (Geographiedidaktische Forschungen, Vol. 42, pp. 79–85). PH Luzern.
- Castiglioni, B. (2009). *Education on landscape for children* (Secretariat Document). Council of Europe.
- Castiglioni, B. (2011). Il paesaggio, strumento per l'educazione geografica [The landscape, a tool for geographical education]. In C. Giorda & M. Puttilli (Eds.), *Educare al territorio – educare il territorio: La geografia per la formazione* [Educating the territory - educating the territory: Geography for training] (pp. 131–138). Carocci.
- Clavel, J., & Noûs, C. (2020). «Planetary Dance» d'Anna Halprin: Etoile d'une constellation kinesthésique et écologique. *Techniques & Culture*, 74(2), 174–177.
<https://doi.org/10.4000/tc.14462>
- Colomina, B., Galán, G., Kotsioris, E., & Meister, A. (Eds.). (2022). *Radical pedagogies*. The MIT Press.
- Comenius, J. A. (1887). *The orbis pictus* (C. Hoole, Trans.). C. W. Bardeen. (Original work published 1658)
- Comenius, J. A. (1896). *The great didactic of John Amos Comenius* (M. W. Keatinge, Ed. & Trans.). Adam and Charles Black. (Original work published 1657)
- Council of Europe. (2021). *Landscape education activities for primary schools: Pedagogical booklet*. Council of Europe.
- Ecosistema Urbano. (2014). *Exuma garden of dreams*.
<https://ecosistemaurbano.com/exuma-garden-of-dreams/>
- Fludd, R. (1617). *Utriusque cosmi maioris scilicet et minoris metaphysica, physica atque technica historia in duo volumina secundum cosmi differentiam diuisa* [The metaphysical, physical, and technical history of both the greater and lesser cosmos, divided into two volumes according to the difference of the cosmos], Johann Theodor de Bry.
- Gill, T. (2014). The benefits of children's engagement with nature: A systematic literature review. *Children, Youth*

and Environments, 24(2), 10–34.

<https://doi.org/10.7721/chilyoutenvi.24.2.0010>

Huizinga, J. (1949). *Homo ludens: A study of the play-element in culture*. Routledge & Kegan Paul. (Original work published 1938)

Intergovernmental Panel on Climate Change. (2023). Summary for policymakers. In H. Lee & J. Romero (Eds.), *Climate change 2023: Synthesis report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 1–34). IPCC. <https://doi.org/10.59327/IPCC/AR6-9789291691647.001>

Lassus, B. (1977a). *Jardins imaginaires*. Éditions Presses de la Connaissance Weber.

Lassus, B. (1977b). *Jeux*. Éditions Galilée.

Lester, S., & Maudsley, M. (2007). *Play naturally: A review of children's natural play*. National Children's Bureau.

Montessori, M. (2004). *The discovery of the child*. Aakar Books. (Original work published 1948)

Montessori, M., & Osslan De Sanctis, L. (2013). *In giardino e nell'orto con Maria Montessori: La natura nell'educazione dell'infanzia* [In the Garden and Vegetable Garden with Maria Montessori: Nature in Early Childhood Education]. Fefè Editore.

Munari, B. (1940). *Mondo aria acqua terra* [World air water earth]. Italego.

Munari, B. (1971). *From afar it is an island*. World Publishing Company.

Munari, B. (1995). *The sea as a craftsman*. Corraini Edizioni.

Munari, B. (2004a). *Animals for sale*. Corraini Edizioni.

Munari, B. (2004b). *Bruno Munari's zoo*. Corraini Edizioni.

Munari, B. (2004c). *Drawing a tree*. Corraini Edizioni.

Munari, B. (2004d). *Drawing the sun*. Corraini Edizioni.

Munari, B. (2004e). *Roses in the salad*. Corraini Edizioni.

Munari, B. (2004f). *The tactile workshops*. Corraini Edizioni.

Papastergiou, C. (2020). Junk playgrounds: The “anti-aesthetics” of play in post-World War II playground design. *Studies in History and Theory of Architecture*, 8, 245–264. <https://doi.org/10.54508/sITA.8.18>

Pasini, R. (2019). *Symbiotic matorral: Becoming-animal and*

other explorations of the cognitive landscape. Libria.

Perna, V. (2020). *L'attività ludica come strategia progettuale: Regole e libertà per una grammatica del gioco in architettura* [Playful activity as a design strategy: Rules and freedom for a grammar of play in architecture]. Quodlibet.

Restelli, B. (2019). *Giocare con la natura: A lezione da Bruno Munari* [Playing with Nature: A Lesson from Bruno Munari]. FrancoAngeli.

Segni Mossi. (n.d.). *Trainings*.
<https://www.segnimossi.net/en/trainings/>

Ward, C. (1978). *The child in the city*. Architectural Press.

Ward, C. (1990). *The child in the country*. Bedford Square Press.

Witcher, D., DeArmond, A., & Williams, A. (2013). *Isamu Noguchi's utopian landscapes*. Unitas Press.

1.2 | Beyond the Playground

Play as a Design Tool for Contemporary Urbanscapes

Valerio Perna

Play represents a fundamental human and cultural activity that shapes how we learn, create, and inhabit our environments.

From Freud's exploration of repetition as a mechanism of mastery to Bateson's understanding of play as metacommunication, scholars have long highlighted its cognitive, social, and symbolic roles. Furthermore, play also serves as a powerful urban force, capable of both disrupting and reconfiguring urban environments and spaces. Starting from Sicart's categories of the carnivalesque and the disruptive, this chapter examines how ludic practices can appropriate urban contexts, unveil their hidden structures, and generate new forms of meaning and inhabiting. Ultimately, play emerges as both an activity in the world and an attitude toward the world, offering architects, planners, and citizens alike a lens for reimagining urban life. The bidirectional relationship between urban ludicity and collective well-being suggests that playful interventions can foster more inclusive, resilient, and joyful cities.

Play, as both human and animal behavior, acts as a lens through which we can explore and understand developmental stages, learning processes, psychological dynamics, cultural practices, emotional experiences, and attachments (Åbernethy, 1974). According to Bateson (1972), the act of play represents a form of metacommunication capable of giving the actions we perform a specific cultural and performative meaning. Undoubtedly, humans have an innate predisposition to play, and the childhood stage is filled with memories linked to the act of play: moments in which children not only engage in activities that bring them joy or satisfaction but also lay the foundation for their growth as human beings—cognitively, socially, and creatively. Children can find playfulness in every situation—turning a stick into a sharp sword to fight dragons or simply drawing squares on the ground to jump into, sometimes balancing on one leg, other times on both. They tap into a shared repertoire of games (hide and seek, rock-paper-scissors, etc.) and expand it without limits, stretching its boundaries until they become blurred and unrecognizable, only to then pass it on to ourselves. During play, a child aims to explore their environment and develop an emotional bond with it until it becomes a familiar space. Sigmund Freud, in his *Beyond the Pleasure Principle* (1920), affirms that children tend to recreate in their playful actions the experiences that have left a strong impression on them in real life to live that occurrence again. Furthermore, through this repetition, the emotional impact of those experiences often diminishes, allowing children to gain a sense of control over the situation—or at the very least, to arrive at a version of it that feels manageable and acceptable to them. But play can be even more. The French linguist Émile Benveniste (1947) establishes an interesting homology between the ‘sacred’ and the ‘act of playing’ where, even though connected, they serve for opposite purposes. While the sacred has an inner tendency to elevate an object to a higher meaning, play puts it back to a tangible dimension that can be understood and manipulated by men. Indeed, it has a desacralizing and disruptive feature, configuring itself not only as a human way of engaging with the world, but as a unique phenomenological perspective that shapes

how we experience and relate to our surroundings (Sicart, 2016). Referring to the work of Sicart (2014), among the categories he establishes, two are employed in an original way to define the act of play. The first one is *carnivalesque*, when it takes possession of events, spaces, and structures consolidated in the real world and overturns their meaning, rendering them either trivial or extremely serious and subverting sociocultural structures. Inspired by Bakhtin's idea of Carnival (1984), play can be considered a magical form of resistance through which any order, convention, or institution is subjected to a total estrangement from its habitual context. Play thus became a form of freedom from the constraining superstructures of everyday life—an anticipation of a truly 'modern' individual, capable, even if only for a limited period, of experiencing a sense of agency and self-determination. The second one, already introduced above, is *disruptive* and highlights how the perturbative nature of play is inextricably linked to its appropriative character. The moment people take over a context, they unveil its conventions and underlying structures and critically examine its positive and negative elements. To overcome reality, they must thus confront its most hidden dynamics and initiate processes that may lead to unknown and possibly even harmful consequences. A good example of this dynamic is represented by the *Potrero Soccer*, played by children in the poor neighborhoods of Argentina and other South American favelas. Even though the underlying system of rules is similar to conventional football, a series of negotiations is imposed by the existing environment (due to a lack of materials, social constraints, and uneven ground) and generates both individual and collective interpretations of the original game. Traditional football is then disrupted and perturbed by the players in some of its basic peculiarities as a result of the users' appropriation of the physical urban landscape, whose original functionality is subverted into a new, informal one. Potrero Soccer is a thorough example of what Sutton-Smith defines as the *rhetorics of play* where the same framework of rules is constantly reinterpreted through contextual negotiation, leading to a plurality of meanings and, according to scholars such as Archetti (2020) and Alabarces (2002) the potrero represents a constitutive element of Argentine

popular culture, linking it to the construction of national identity and to broader social imaginaries.

As illustrated in this example, the relationship between play and the urban landscape of contemporary cities is more complex than initially expected. It could represent a way to grasp and project new perspectives on the complex and challenging urban environments that both designers and citizens face. Lefaivre and Döll (2007) claim for the need of ‘inspiring alternatives’ that could cultivate the potential Huizinga’s *homo ludens* and for the understanding of play as a proper design tool (Perna, 2020), while Quentin Stevens (2007) in his *The Ludic City* studies game design theory and practice alongside architectural theory and practice (Waltz, 2010; Perna, 2017). Furthermore, following the work of Sicart (2016), a distinction is necessary when referring to the role and importance of ludic activity in urban environments: the one within play and playfulness.

According to him, play is an activity that occurs *in the world*, while playfulness is an attitude *toward the world*. This subtle difference highlights an important distinction between play, which keeps its intrinsic value and purpose, and playfulness, which reflects a specific mindset toward a place, context, or situation where its original goals are still acknowledged and not undermined. In fact, play happens in designated areas like playgrounds and arenas, whereas playfulness is the process of making everyday objects and situations playful—‘*playfication*’—allowing for their use and fostering personal expression. In the field of design, this differentiation highlights two distinct ways of thinking about the connection between ludic activity and the urban environment. On the one side, there is the *design for play*, as the design of spaces and situations that stimulates its autotelic characteristic. On the other hand, the *design for playfulness* concerns the possibility of designing spaces and objects for appropriation that do not necessarily respect the traditional ideas or norms of traditional play spaces.

The first typology can be considered the most common and confines the ludic moment within a specific play and time, even with different nuances concerning the designer’s capacity to catalyze the users’ expectations. The playgrounds represent a good example of this approach—like the Dijkstrastraat one—designed in the Netherlands by

Aldo van Eyck. He dedicated a significant part of his career to creating playgrounds within the bombed-out areas of post-war Amsterdam, laying the groundwork for a labyrinthine city where spaces were not rigidly predetermined but instead invited reinterpretation from the children. In his mind, architecture had to be a catalyst for play, a stage upon which users themselves could re-script the meaning of the urban fabric through ludic engagement. The second approach is characterized by the non-existence of physical limits other than those that the city itself produces, and that stimulate activities that draw new spaces of play in the city beyond those designed and determined by urban planners. Skateboarding and parkour are good examples of this phenomenon, as in most cases, even though dedicated spaces for these activities are designed and promoted in the city, users tend to show a preference for performance-based appropriation, often conquering and occupying spaces that were not intended for that purpose. Indeed, the material architecture of the cityscape can itself be a playful material to be appropriated and used for unexpected purposes, extending the moment of play beyond Huizinga's magic circle. An urban environment like this is one prefigured by Pieter Bruegel the Elder in 1560 in his painting *Children's Games*, where the entire composition showcases over ninety different urban games rooted in the concepts of playfulness and appropriation. Nevertheless, the ones shown here are just two of the many approaches that can highlight the potential and pervasiveness of play and games in contemporary cities. Play has always been a form of collective action, able to conform not only to how we inhabit and experience the city but also the very principles by which urban spaces are conceived, organized, and reimagined for communal life. In conclusion, as Donoff (2017) argues, the relationship between urban ludic interventions and the overall happiness quotient—or as he calls it, the '*ludicity*'—of an urban environment is strongly dependent. On the one hand, playful gestures at the micro-scale, such as street performances, improvised games, or the re-appropriation of public furniture, can enrich the collective atmosphere of urban life. On the other hand, the broader ludic character of a city, its openness to spontaneity, inclusivity, and

creative uses of space, amplifies the emergence of such individual interventions, creating a feedback loop in which play and the urban environment shape one another in a continuous virtuous circle for happier and more sustainable spaces.

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References

- Abernethy, W. D. (1974). Concepts of play. *Theory into Practice*, 13(4), 311–316.
<https://doi.org/10.1080/00405847409542526>
- Alabarces, P. (2002). *Fútbol y patria: El fútbol y las narrativas de la nación en la Argentina* [Football and homeland: Football and national narratives in Argentina]. Prometeo Libros.
- Archetti, E. P. (2020). *Masculinities: Football, polo and the tango in Argentina*. Routledge.
<https://doi.org/10.4324/9781003085980>
- Bakhtin, M. (1984). *Rabelais and his world* (H. Iswolsky, Trans.). Indiana University Press.
- Bateson, G. (1972). *Steps to an ecology of mind: Collected essays in anthropology, psychiatry, evolution, and epistemology*. Chandler Publishing.
- Benveniste, É. (1947). *Le jeu comme structure* [The game as structure]. *Deucalion: Cahiers de philosophie* [Deucalion: Philosophy Notebooks]. 2, 161–167.
- Huizinga, J. (1938). *Homo ludens: Proeve einer bepaling van het spelelement der cultuur* [Homo ludens: An attempt at a definition of the game element of culture]. H. D. Tjeenk Willink & Zoon.
- Lefaivre, L. (2007). *Ground-up city: Play as a design tool*. 010 Publishers.
- Perna, V. (2018). From smart cities to playable cities: Towards playful intelligence in the urban environment. *archiDOCT*, 6(1), 51–62.
- Perna, V. (2020). *L'attività ludica come strategia progettuale: Regole e libertà per una grammatica del gioco in architettura* [Play as a Design Strategy: Rules and Freedom for a Grammar of Play in Architecture]. Quodlibet.
- Sicart, M. (2014). *Play matters*. The MIT Press.
- Sicart, M. (2016). Play and the city. *Navigationen: Zeitschrift für Medien- und Kulturwissenschaften* [Navigations: Journal for Media and Cultural Studies], 16(1), 25–40.
<https://doi.org/10.25969/mediarep/1580>
- Stevens, Q. (2007). *The ludic city: Exploring the potential of public spaces*. Routledge.
<https://doi.org/10.4324/9780203961803>
- Sutton-Smith, B. (2001). *The ambiguity of play*. Harvard University Press.
- Walz, S. P. (2010). *Toward a ludic architecture: The space of play and games*. Lulu Press.



Figure 17 | Child seemingly alone in nature.
Photograph by Majd Khaldi, 2023.

1.3 | Who is the Child in Nature?

Ideas and Theories to Work with

Alison Goss

This chapter considers educational perspectives that understand a child's development as occurring through meaningful social and sensorial experiences within a cultural setting. The perspectives see the purpose of education as a means through which a child develops the skills, critical thinking, and imagination necessary to contribute to the well-being of society. For example, in the instance of the Comenius project, the theory of education would facilitate the exploration of ways for children to address problems, such as the changing landscapes wrought by climate change, in a developmentally appropriate way. The chapter then explores pedagogical concepts, based in part on a Montessori understanding of teaching and learning, that offer meaningful ideas when designing for optimal learning experiences. Concepts discussed are the autonomy of the child, the importance of spatial reasoning in development, a prepared environment, the allowance of time for learning, nomenclature, and the role of the adult. Together, these educational perspectives and pedagogical concepts may be understood as contributing foundational ideas to a new and innovative educational approach suited to children's developmental needs as they encounter issues such as the current challenges in climate transition.

Introduction

This chapter explores educational approaches that offer theoretical legitimacy to children's endeavors in (co)designing the landscapes. The chapter also discusses pedagogical ideas worth reflection when reframing a new educational methodology sensitive to the developmental needs of children and the global urgency of changing landscapes.

Theoretical Concepts

Ideas about the child in nature have evolved over time. Rousseau held the idea of a natural child, born good, who developed freely outside in the natural world (Figure 17). Once in society, however, the child is exposed to greed, and corruption (Noddings, 2012). The idea of nature as something separate from culture, as a place where *'the confusion of the world'* does not exist, is echoed today (Louv, 2005, p. 7). Rather than dichotomizing nature and society, Vygotsky (1978) understood the development of concepts as both biological and social and could only take place within a cultural setting. Other theories such as embodied cognition (Varela, Thompson, and Rosch, 1991) and sensuous cognition (Radford, 2013) also entwine individuals within a corporeal and symbolic culture, that is not separate from nature.

Montessori and Dewey, in common with others such as Pestalozzi and Froebel, believed that a child's development was made possible using the senses (Noddings, 2102). They incorporated this understanding within a broader definition of the purpose of education which was to prepare children for a contributing life in a democratic society. Montessori designed a comprehensive curriculum for the primary child called *'Cosmic Education.'* Its purpose was to introduce the wonders of their universe, and to show the interconnectedness and interdependence of all things. Through *'Cosmic Education'* children could develop the critical thinking and the imagination necessary to actively become agents of change for the good in the world (O'Donnell, 2007). More recently, children's development has been considered an apprenticeship which take place in a guided social setting and where children learn the skills to

manage culturally defined problems with available resources (Rogoff, 1990). Children's development has also been understood as situated learning where learning is an integral aspect of social practice (Lave and Wenger, 1991). Children, according to these educational theories, are legitimate participants in society and as such are positioned as having a role in (co)designing meaningful experiences to mitigate climate changes in the landscape. Theoretical and pedagogical ideas from Vygotsky, Montessori, Dewey, and others, offer a substantial and relevant foundation for innovation when designing new educational methods.

Pedagogical Concepts

This section focuses on ideas about children's learning that may be thought important when considering children's educational needs. The Montessori method offers established pedagogical criteria for meaningful learning experiences and is referenced for examples (Lillard, 2007).

The Autonomy of the Child

The development of concepts requires that the child is able to pay attention for sustained periods (Vygotsky, 1978). The circumstances that foster attention and engagement are generally found in play, and one of the hallmarks of play is the autonomy the child is afforded. Play and learning, however, are concepts that have also been dichotomized (Björklund, Magnusson, and Palmér, 2018). A clear definition of play remains elusive (van Oers, 2013). The children's activities in a Montessori classroom have sometimes been termed guided play, although Montessori preferred the term '*work*' (Lillard, 2007). In guided play, the adult develops engaging and challenging activities that meet the adult's learning goals. The children are supported by the adult through observations, comments, discussions, and reflections about the activities with the children (Fisher et al., 2013). In Montessori pedagogy, a child is free to choose any activity that has already been shown. The child is free to use their imagination, free to decide when to start and finish an activity and free to engage with the others chosen.

The Importance of Spatial Reasoning

Experiences involving spatial reasoning are critical for children's development in life (Davis et al., 2015). Spatial reasoning may be understood as reasoning about relationships between objects and between oneself and objects. It is a type of non-verbal reasoning used from a very young age. It is dynamic and involves spatial movement. Considering the importance of spatial reasoning, opportunities for children to develop their spatial skills are generally limited. There may be a lack of appreciation for the importance of spatial skills, a lack of time for processing, a lack of challenging, real-world opportunities, a lack of objects to manipulate, or places to move and explore. The development of spatial skills is best addressed with objects that are part of a goal-directed activity where children may use all their senses, and fine and gross motor skills. A deep understanding of children's spatial development should be considered an important part of a new educational methodology in the Comenius project, considering the wealth of opportunity for this type of reasoning it will afford.

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A Prepared Environment

Recalling that learning occurs in a social setting, an environment that offers opportunities for socialization is important. In a Montessori setting, mixed age groupings add a powerful attraction for younger children who are interested in the older children's activities. Mixed age groupings are reflective of society's makeup and eliminate competition between the children, rather fostering cooperation and mutual support. The older children may take on a leadership role in helping younger children while at the same time learning to articulate what they have understood. It is mutually beneficial.

Time to Process

Allowing uninterrupted time for open-ended and challenging activities is critical for developing genuine understanding. Interruptions damage engagement and make it harder for children to reengage. Montessori

suggested an extended period of uninterrupted time with a minimum period of three hours (Lillard, 2007). Learning is not considered linear in the Montessori method, but as a spiral, where ideas and concepts are gradually introduced to build on previous ideas and concepts. The children have an extended period in the classroom of three years, in some instances six years. This time lends itself to children having ever deeper explorations into interesting work. In addition, the extended time supports the development of trust in relationships.

The Role of the Adult

The environment needs to be prepared and maintained by the adult. There is the physical environment with the tools required for tasks, the sociocultural aspects of the classroom, such as the language, the terminology, the community values, and the expectations for agreed-upon behavior. The adult models desired behaviors that allow the children to take part in '*situated learning*' (Lave and Wenger, 1991). The adult's role is to observe individual children and make changes to lessons and the environment based on those observations. Through recorded observations, the adult may reflect on what is taking place, any changes that need to be made, and insights on individual children's experiences. Assessment in the classroom is often based on children's verbal responses, and children may not have adequate nomenclature for the subject; therefore, nomenclature needs to be taught directly and prepared by the adult. Children need access to correct terminology as it allows for clarity in communication. Part of preparing the environment for meaningful experiences is organization and careful planning.

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Summary

Stimulating activities may be (co)designed with children. The activities need to reflect the interests and capabilities of the children to ensure success. These (co)designed activities can be considered as an apprenticeship in learning (Rogoff, 1990), and are a valid avenue for children to take part in society's endeavors to mitigate the challenges of

climate change. The educational theories and pedagogical concepts discussed here offer a basis on which to generate these innovative ideas in the Comenius project.

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References

- Björklund, C., Magnusson, M., & Palmér, H. (2018). Teachers' involvement in children's mathematizing: Beyond dichotomization between play and teaching. *European Early Childhood Education Research Journal*, 26(4), 469–480.
<https://doi.org/10.1080/1350293X.2018.1487162>
- Davis, B., & Spatial Reasoning Study Group (Eds.). (2015). *Spatial reasoning in the early years: Principles, assertions, and speculations*. Routledge.
<https://doi.org/10.4324/9781315762371>
- Fisher, K. R., Hirsh-Pasek, K., Golinkoff, R. M., & Newcombe, N. S. (2013). Taking shape: Supporting preschoolers' acquisition of geometric knowledge through guided play. *Child Development*, 84(6), 1872–1878.
<https://doi.org/10.1111/cdev.12091>
- Friends of West Toronto Railpath. (n.d.). *Connecting West Toronto*.
<http://www.railpath.ca>
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.
<https://doi.org/10.1017/CBO9780511815355>
- Lillard, A. S. (2007). *Montessori: The science behind the genius*. Oxford University Press.
- Louv, R. (2005). *Last child in the woods: Saving our children from nature-deficit disorder*. Algonquin Books of Chapel Hill.
- Noddings, N. (2012). *Philosophy of education* (3rd ed.). Westview Press.
- Radford, L. (2013). Sensuous cognition. In D. Martinovic & V. Freiman (Eds.), *Visual mathematics and cyberlearning* (pp. 141–162). Springer.
- Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context*. Oxford University Press.
<https://doi.org/10.1093/oso/9780195059731.001.0001>
- van Oers, B. (2013). Is it play? Towards a reconceptualization of role play from an activity theory perspective. *European Early Childhood Education Research Journal*, 21(2), 185–198.
<https://doi.org/10.1080/1350293X.2013.789199>
- Varela, F. J., Thompson, E., & Rosch, E. (1991). *The embodied mind: Cognitive science and human experience*. MIT Press.
<https://doi.org/10.7551/mitpress/6730.001.0001>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.



Figure 18 | Children view the landscape through a built nest as part of *The Salt of Life* landscape project in Bulgaria. Photograph by Diana Pavlova, 2018.

1.4 | Landscape Education for Primary Schools

A Contribution of the Council of Europe

Maguelonne Déjeant-Pons

This chapter outlines the primary initiatives of the Council of Europe in implementing the European Landscape Convention's work program to promote landscape education. In 2022, these efforts led to the publication of the Pedagogical booklet *Landscape Education Activities for Primary Schools*. Created for primary school teachers, this resource aims to ignite students' curiosity and interest in the landscape by encouraging them to think critically about what 'landscape' means and to explore its environmental, social, cultural, and economic aspects across different places and periods. These activities are designed to help students imagine their roles as individuals and members of society, empowering them to become active participants and leaders. They can be used in both formal and informal educational settings.

Defining the Landscape

'The landscape (...) has an important public interest role in the cultural, ecological, environmental and social fields, and constitutes a resource favourable to economic activity and whose protection, management and planning can contribute to job creation; (...) contributes to the formation of local cultures and ... is a basic component of the European natural and cultural heritage, contributing to human well-being and consolidation of the European identity; (...) [is] at global level as an essential component of human being's surroundings; (...) is an important part of the quality of life for people everywhere: in urban areas and in the countryside, in degraded areas as well as in areas of high quality, in areas recognised as being of outstanding beauty as well as everyday areas; (...) is a key element of individual and social well-being and (...) its protection, management and planning entail rights and responsibilities for everyone.'

*'The Preamble,' European Landscape Convention
(Council of Europe, 2000, pp.1-2)*

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The member States of the Council of Europe that have signed the Council of Europe Landscape Convention have expressed their intention *'to achieve sustainable development based on a balanced and harmonious relationship between social needs, economic activity, and the environment,'* highlighting the natural and cultural aspects of landscapes and how they interact. Because landscape is recognized as *'an important part of the quality of life for people everywhere'* and *'a key element of individual and social well-being'* (Council of Europe, 2000, p. 2), the Convention requires each Party to establish and carry out landscape policies focused on protection, management, and planning through specific measures (Article 5, b.), some of which include education (Article 6, B, c.). Each Party agrees to promote *'school and university courses which, in the relevant subject areas, address the values attaching to landscapes and the issues raised by their protection, management, and planning'* (Council of Europe, 2000, p. 4). The Committee of Ministers of the Council of Europe's *Recommendation CM/Rec (2008)3*

(Section I.2.3) (Council of Europe, 2008) on guidelines for implementing the European Landscape Convention describes landscape as a teaching resource because it allows students to observe visible signs of their environment related to spatial planning issues. Landscape reading helps them understand current and historical approaches to landscape ‘production’ as a reflection of a community’s identity. Various activities have been carried out under the Council of Europe Landscape Convention work program to promote landscape education.

Thematic Reports on Landscape Education

Several thematic reports on landscape education have been developed. A report titled *Awareness-raising, Training and Education* was presented at the Second Council of Europe Conference of the Contracting and Signatory States to the European Landscape Convention (Council of Europe, 2002) and then published (Council of Europe, 2006). The report highlights how much landscapes need care and that, if seen only as commodities, they will inevitably lose their value and appeal. A second report titled *Education on Landscape for Children* was presented at the 5th Council of Europe Conference on the European Landscape Convention (Council of Europe, 2009) and later published (Council of Europe, 2012). This report aims to connect landscape education with the Convention and facets of sustainable development education from a broader pedagogical viewpoint related to the United Nations Decade of Education for Sustainable Development (2005-2014). It emphasizes that sharing more knowledge about landscapes and how they change, along with enhancing landscape reading skills, are crucial for increasing awareness of the value of local environments, fostering openness to other places and cultures, and encouraging responsible landscape management. The report also mentions projects carried out by various countries (Armenia, Belgium, Italy, Slovenia, and Spain) to implement the Convention. A third report, also titled *Education on Landscape for Children*, was presented at the 7th Council of Europe Conference on the European Landscape Convention (Council of Europe, 2013) and subsequently published (Council of Europe,

2017). It notes that, thanks to the Convention, landscape has become not only a key source of reflection and action for professionals and governments but also a vital focus for future citizens. It enables them to better understand their environment and, most importantly, to shift from passively perceiving landscapes to actively engaging with them as subjects of knowledge.

Recommendations Concerning Landscape Education

Two recommendations for promoting landscape awareness through education and pedagogical materials for landscape education in primary schools were prepared by working groups and the Council of Europe Steering Committee responsible for landscape and then adopted by the Committee of Ministers. The first recommendation focuses on raising awareness: It states that one goal of education is to *'train young people and equip them with a set of skills necessary for citizenship and democracy'* (Council of Europe, 2014), and that *'educational activities in the landscape field are an excellent way of giving meaning to the future'* (Council of Europe, 2014). It suggests that the governments of member States Parties to the Convention adopt legislative, regulatory, administrative, financial, and other appropriate measures to initiate or develop landscape education activities and promote landscape awareness among young people, following certain principles outlined in the recommendation. The second recommendation addresses landscape teaching in primary schools, advising that member States make landscape teaching activities for primary education available as a source of inspiration (Council of Europe, 2015). The Council of Europe also published a booklet in several languages on landscape education activities for primary schools (Council of Europe, 2021). The activities presented can be carried out within both formal and non-formal education.

The booklet suggests that landscape education aims to stimulate pupils' curiosity and interest in landscapes by encouraging them to:

- Reflect on what they understand by 'landscape.'
- Examine the environmental, social, cultural, and economic aspects of landscapes across different spaces

and times.

- View the landscape as an open, ever-changing system.
- Recognize the challenges involved in protecting, managing, and planning landscapes.
- Consider the specific values that various stakeholders and communities assign to landscapes.
- Envision their role in contributing to the sustainable and harmonious development of landscapes as individuals and members of society.

The booklet notes that activities involve multiple subjects and can be approached in an interdisciplinary way. They can relate to any landscape—whether natural, semi-natural, rural, urban, or peri-urban—whether it is nearby or distant. These landscapes can be ‘everyday’ environments that are either remarkable or degraded. Activities can be conducted indoors or outdoors at school. Students are often more motivated when they participate in outdoor activities. They can also explore media libraries and perform surveys. Activities are designed to be completed individually or in groups. Involving students’ families or others often enriches discussions and builds intergenerational relationships.

The activities are organized into five pedagogical sequences: landscape perception, landscape identification, landscape analysis, landscape reflection, and landscape reporting. Some activities are inspired by traditional games, which teachers can adapt to fit their specific context.

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Exchange of Information Regarding the Implementation of the Council of Europe Landscape Convention

The Information System on the Council of Europe Landscape Convention is a database of public landscape policies carried out at the national, regional, and local levels. Therefore, the database’s content determines how information is exchanged between the Convention’s parties on public landscape policies. The Council of Europe’s efforts to promote landscape education continued without holding a meeting to implement the European Landscape Convention on Landscape and Education (Council of Europe, 2019).

Landscape Education Projects

The Council of Europe Landscape Award Alliance recognizes exemplary projects submitted by the States Parties to the Council of Europe Landscape Convention. These projects demonstrate that promoting the territorial aspect of human rights and democracy can be achieved by enhancing the landscape features of communities' environments (Council of Europe, 2017; Council of Europe, 2021). Some of the projects showcased during the Award Sessions include landscape education:

2nd Session (2010-2011)

- *Education and Awareness-raising: City, Territory, Landscape*, Generalitat of Catalonia and Landscape Observatory of Catalonia, Spain.

The project aims to educate young people in Catalonia, aged 12 to 16, about landscape and territory. By providing mandatory education on these topics—through teaching materials and an interactive website—the authorities seek to foster a culture of territory and landscapes.

- *We are Making our Landscape*, Slovenian Association of Landscape Architects, Slovenia.

The project included an art and photography competition for primary schools and kindergartens to encourage children to become aware of their surroundings. This competition involved an exhibition, and several prizes were awarded to promote awareness and reflection on the landscape.

3rd Session (2010-2011)

- *Environmental Education in the Town of Strakonice, year by year, or Pilgrimage through the Contemplative Landscape*, Municipality of Strakonice, Czech Republic.

The project raises general awareness about the history of the South Bohemia region and promotes young people's understanding of their environment. In thematic cycles, comparisons are made between the landscape described in the book *The Contemplative Landscape* (*Země zamyšlená*), written by a local artist (Stehlík, 1947), and today's landscape.



Figure 19 | The Atanasovsko Lake served as the backdrop for *The Salt of Life* project by the Bulgarian Biodiversity Foundation in Bulgaria. Photograph by Spas Uzunov, 2018.



Figure 20 | Children and parents playing with salt at the *Salt Fest* near Atanasovsko Lake in Bulgaria. Photograph by Diana Pavlova, 2018.

5th Session (2016-2017)

- *Education of Children in Heavily Industrialized Landscapes*, Elementary School in Most, the Czech Republic. The project involved a comprehensive, long-term school approach to teaching children in heavily industrialized and extensively transformed landscapes caused by coal mining.
- *Regeneration of the Landscape and Archaeological Park of the Valley of the Temples in Agrigento*, Department of Cultural Heritage and Identity of Sicily, Italy.
To promote the sustainable development of the park's resources, park authorities have coordinated efforts among public and private partners, recreating high-quality traditional products and applying ancient Sicilian agricultural practices, complemented by educational activities for children.

6th Session (2018-2019)

- *Dragodid: Preserving the Dry Stone Masonry Techniques of the Eastern Adriatic*, 4 Grada Dragodid, Croatia.
Dragodid is an education, training, and awareness-raising project focused on the dry stone heritage of Croatia and the Eastern Adriatic. Developing a regular schedule of public workshops helps educate children and young people about the importance of dry stone in managing and enhancing the landscape.
- *Let's do it!*, Estonian Fund for Nature (NGO), Estonia.
The project began with a nationwide cleanup campaign to remove illegally dumped rubbish. Various group efforts to restore the landscape were then organized across the country. The project has resulted in many initiatives involving children and young people to protect and care for the landscape.

7th Session (2020-2021)

- *Biodiversity in the City: Bergamo and the Astino Valley*, Foundation della Misericordia Maggiore of Bergamo, Italy.
The project involved creating educational itineraries, reintroducing traditional crops using organic farming methods and an irrigation network, and organizing cultural, educational, and training events.

- *The Salt of Life*, Bulgarian Biodiversity Foundation, Bulgaria.
The project preserved the landscape of the coastal lagoon of Atanasovsko Lake, a testament to the relationship between humans and nature (Figures 19-21). It has strengthened the public's connection to the ecological, social, and cultural importance of this landscape. Educational activities were conducted with children (Figures 18-20).
- *The Land of Bees*, kRAJ Civic Association, Slovak Republic.
The association has built a unique education center and now operates educational apiaries for professionals and the general public. It organizes experimental programs for all kinds of schools, including day camps and activities that systematically raise public awareness of the importance of bees and natural pollinators for the environment.
- *Dokuma Park, a Culture, Nature and Art Park for Society*, Antalya Kepez Municipality, Turkey.
By deciding to create a park dedicated to connecting nature and culture on the site of an old spinning mill complex, the municipality of Kepez has provided residents with a significant cultural and recreational area accessible to all. Educational activities are conducted with children.
- *The Sill: National Landscape Discovery Centre*, Bardon Mill, Northumberland National Park Authority, United Kingdom.
The center provides a comprehensive range of activities and events to nurture current and future landscape enthusiasts, expand access to the countryside for everyone, and ensure these remaining wild places are preserved while the communities within them continue to flourish.

Conclusions

Landscape education—at all stages of life—is essential because the Signatories to the Council of Europe Landscape Convention have expressed their desire to ‘respond to the public’s wish (...) to play an active part in the



Figure 21 | The Atanasovsko Lake in Bulgaria.
Photograph by Spas Uzunov, 2018.

development of landscapes' (Council of Europe, 2000, p. 1). This active role must be carried out through '*procedures for the participation of the general public*' (Council of Europe, 2000, p. 3) and '*public consultation*' when landscape quality objectives are being defined for landscapes that are identified and assessed (Council of Europe, 2000, p. 4). In this context, landscape education is crucial for making proposals and decisions with a complete understanding of the facts. The work done by the Council of Europe on landscape education aims to support the implementation of Goal 4, *Quality Education*, of the United Nations 2030 *Agenda for Sustainable Development* (United Nations, 2015, p. 17). It is hoped that the activities suggested in the *Pedagogical Booklet* can help students envision their role as individuals and members of society, actively engaging with the landscape.

Maguelonne Déjeant-Pons served as the Executive Secretary of the Council of Europe Landscape Convention from 2020 to 2022. In 2022, she was named an Honorary Member of the International Federation of Landscape Architects - Europe (IFLA-Europe). From 1978 to 1987, she worked as a lawyer at the court, a lecturer at the University of Law and the Institute of Political Sciences, and an expert for the United Nations Environment Programme. From 1987 to 2022, she held leadership roles at the Council of Europe, including positions at the European Court of Human Rights, the Directorate of Environment and Local Authorities, the Department of Environment and Sustainable Development, the Cultural Heritage and Landscape Division, and the Landscape and Spatial Planning Division. She has authored books and papers on topics such as the environment, sustainable development, human rights, landscape, and natural and cultural heritage.

References

Council of Europe. (2000). *European Landscape Convention* (European Treaty Series No. 176).
<https://rm.coe.int/16807b6bc7>

Council of Europe. (2002). *Landscape policies: Contribution to the well-being of European citizens and to sustainable development (social, economic, cultural and ecological approaches)* (Document T-FLOR 2 (2002) 22).
<https://rm.coe.int/16806b071d>

Council of Europe. (2005). Landscape through literature. *Naturopa/Culturopa*, (103).
<https://rm.coe.int/16806ae154>

Council of Europe. (2006). *Landscape and sustainable development: Challenges of the European Landscape Convention*. Council of Europe Publishing.

Council of Europe. (2008). *Workshops for the implementation of the European Landscape Convention* (Document CEP-CDPATEP (2009) 12).
<https://rm.coe.int/16806b0836>

Council of Europe. (2012). *Landscape facets: Reflections and proposals for the implementation of the European Landscape Convention*. Council of Europe Publishing.

Council of Europe. (2013). *Report on landscape national policies: Summary of national experiences* (Document CEP-CDPATEP (2013) 9).
<https://rm.coe.int/16806b0863>

Council of Europe. (2017). *Landscape dimensions: Reflections and proposals for the implementation of the European Landscape Convention*. Council of Europe Publishing.

Council of Europe. (2017). *The Landscape Award Alliance of the Council of Europe* (Territory and Landscape Series, Vol. 1, No. 105). Council of Europe Publishing.

Council of Europe. (2019). *21st Council of Europe Meeting of the Workshops for the Implementation of the European Landscape Convention: Landscape and education* (European Spatial Planning and Landscape Series, No. 114). Council of Europe Publishing.

Council of Europe. (2021). *Landscape education activities for primary schools: Pedagogical booklet* (European Spatial Planning and Landscape Series, No. 121). Council of Europe Publishing.

Council of Europe. (2021). *The Landscape Award Alliance*

of the Council of Europe (Territory and Landscape Series, Vol. 2, No. 120). Council of Europe Publishing.

Council of Europe, Committee of Ministers. (2008). *Recommendation CM/Rec(2008)3 of the Committee of Ministers to member states on the guidelines for the implementation of the European Landscape Convention*.

<https://rm.coe.int/16802f80c9>

Council of Europe, Committee of Ministers. (2014). *Recommendation CM/Rec(2014)8 of the Committee of Ministers to member States on promoting landscape awareness through education*.

<https://rm.coe.int/09000016805c5138>

Council of Europe, Committee of Ministers. (2015). *Recommendation CM/Rec(2015)7 of the Committee of Ministers to member States on pedagogical material for landscape education in primary school*.

<https://search.coe.int/cm?i=09000016805c3a7c>

Stehlík, L. (1986). *Země zamyšlená* (Original work published 1947). Československý Spisovatel.

United Nations. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development* (Resolution A/RES/70/1).

<https://sdgs.un.org/publications/transforming-our-world-2030-agenda-sustainable-development-17981>

1.5 | Playing Becoming-Animal

(Co)explorations in the Sierra Madre Oriental

Roberto Pasini

This chapter illustrates the *Matorral Simbiótico*, a research-by-design project implemented in the Sierra Madre Oriental of Mexico, equipped with an ecological route and a set of landscape installations that foster environmental awareness through playful interactions with nature. The function of play is particularly relevant for groups of schoolchildren from primary schools in Monterrey, who are guided through the floral and faunal biodiversity of the *matorral* shrubland by artists and activists participating in the (co)creation of the project. The central glade of the project features installations that invite visitors to engage in playful, semi-choreographed activities by impersonating resident species of the *matorral* and to adopt alternative perspectives for a multisensory perception of the environment. The ‘power of play’ is tested as a tool to destabilize conventional ways of thinking and develop a fairer attitude towards nature and society.

A team of the 2015-2016 thesis lab students at Universidad de Monterrey had developed a special fascination for the *matorral submontano*, a shrubland ecosystem that covers the lower hillsides of the Sierra Madre Oriental surrounding the metropolitan area (Figure 22). Patricio Garza, Andrea Ramos, and Fernanda Rosas's thesis project envisioned the retreat of the anthropic societies that had eradicated the valley's ecosystems while sprawling a 5-million industrial conurbation. Conventional settlements were to be replaced by sparse dwelling units for a radically shrinking community, designed to reconnect ruptured parts of the landscape ecology. That fascination for the *matorral* was later converted into a project funded by the university and supported by the authority of the Parque Ecológico Chipinque protected area. The *Matorral Simbiótico* was conceived as a 'research by design' capable of contributing to the campaign for raising environmental awareness conducted by the university and local administrations, and it is particularly oriented to the younger generations. Designed and implemented between 2016 and 2018, the project proposed establishing an ecological route along an abandoned maintenance path of a nearby electro-duct. Following the ridgeline of the relief, the route guides visitors along a trek through the notable biodiversity of the *matorral*, illustrating the ecological dynamics through textual and graphic information. A carved metal portal introduces the visitors to an alternative sphere, surrounded by lush vegetation and distinct from the urban society of the nearby city. The route first crosses an area of dense arbustive vegetation, where the presence of diverse fauna is revealed by galleries excavated in the foliage by the recurrent passage of animals. Galleries of different sizes can be associated with specific species that cross the route. A second segment of the route plunges the visitors into an area of luxuriant vegetation, where majestic exemplars of identitarian plants such as the *Magney* (*Agave americana*) and *Nopal* (*Opuntia stricta*), as well as plants characteristic by foliage and flowers such as the *Anacahuíta* (*Cordia boissieri*), *Colorín* (*Dermatophyllum secundiflorum*), *Hierba del potro* (*Caesalpinia mexicana*), are combined in natural flamboyant associations. Halfway through the route, between the faunistic and

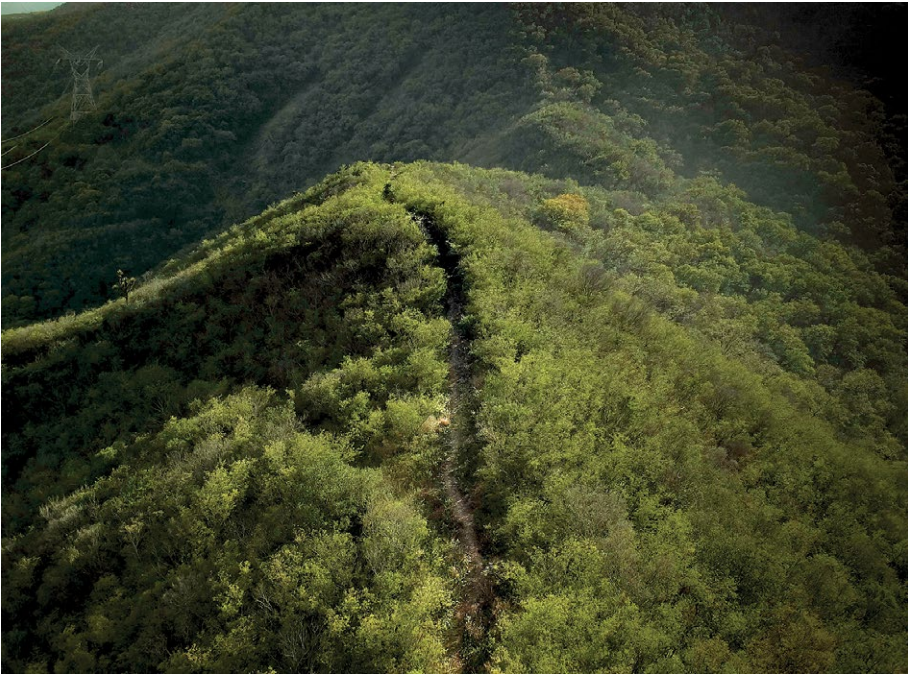


Figure 22 | The Matorral simbiótico route across the Sierra Madre Oriental, Nuevo León, México. Photograph by Rodrigo Legorreta, 2018.

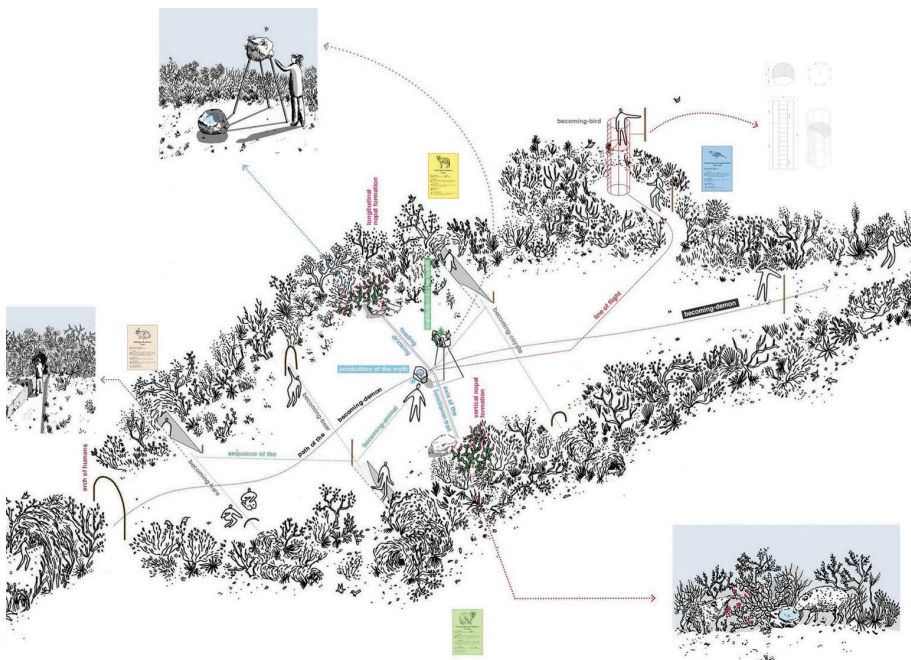


Figure 23 | The glade of the Becoming-Animal installations. Hand and digital drawings by Andrea Ramos Gándara, 2018.

floristic segments, a glade opens over a small plateau in the terrain, where a set of landscape installations is arranged. The installations are designed to engage visitors in playful and multisensory interactions with the site and its natural features. The apparatus offers, first of all, an original understanding of the ecological dynamics and value of the place. Invited into small trenches, constructed frames, totemic compositions, and elevated platforms, the visitors are prompted to perceive the environment from the vantage point of non-human residents of the *matorral*, such as the wild hare, the ochraceous coyote, the black bear, and the green jay. The activity is meant to expand the individual knowledge about the specific context by acquiring objective information about its characteristic species. At the same time, the visitors build up an intersubjective imaginary that transcends the ecological denotations to form a shared cultural heritage of intangible figures, where the mythic animals of the ancient fables replace the conventional imaginary of domesticated pets.¹

With the guidance of visual signages, the visitors are engaged in semi-choreographed, open-ended performances and tackle a set of installations that invite them to hear like the hare, smell like the bear, see like the coyote, and fly like the jay (Figures 23-24). While discovering the multiplicity of the perceptual spheres that comprise the *matorral*, the visitors destabilize their anthropocentric perspective on nature and the world. The visitors abandon social conventions to plunge into the polysemic formations of the wild, detaching from the filiative lineages of the family to accept the rhizomatic entanglements of the pack, and engage in a deeper level of experiencing the site, a philosophical level beneath that of ecology and perception. The idea of the landscape as an ensemble of multiple, intersecting spheres of perception, through which every resident species, and eventually every individual, identifies resources, is elaborated by the Italian ecologist Almo Farina in his paradigm of the '*Ecofield*.' Farina develops ideas introduced by Jakob von Uexküll in *A Foray into the Worlds of Animals and Humans* of 1934, such as the necessity of opening to a non-human multiplicity of perspectives to analyze the landscape composite, and later by Zeev Naveh, pursuing an eco-centric cognition of the environment.

On the central glade, the cognitive perspective over the landscape combines a philosophical perspective, recomposing analytical and cultural captures of reality. The set of installations on the glade is construed as the *in-situ* transcription of a 'Becoming-Animal' worldview paradigm codified by the French philosopher Gilles Deleuze and psychiatrist Félix Guattari in the tenth chapter '1730: *becoming-intense, becoming-animal, becoming-imperceptible...*' of their *Mille Plateaux* published in 1980, the second volume of their work on *Capitalism and Schizophrenia*. In broad terms, the 'Becoming-Animal' paradigm is a tool intended to destabilize the perspective of the colonizing agent over the colonized subject under multiple angles and levels of interpretation of reality. It applies to the human colonization of nature for the extraction of resources beyond the threshold of subsistence, as well as to the economic and cultural colonization of human societies and associated anthropic territories. The 'becoming-...' paradigm is a component of a broader and influential way of interpreting the relationship between human society and the Earth that Deleuze and Guattari refer to as '*geo-philosophy*,' that is, a philosophy plotted over the surface of human geography rather than along the line of human history. In the overall, the arrangement of the installations on the glade favors the simultaneous capture of the landscape through cognitive and geo-philosophical, that is, analytical and cultural, tools, where the identification of resource-predation patterns is intersected with the consolidation of an intersubjective cultural narrative of the site.²

The implementation of the installation with its embedded narrative was, in fact, a collective effort that, besides the design team, also involved groups of local artists and activist collectives and agencies, such as the Mestizos Crew, Ensemble Q-sión, Agencia Mexicana de Cultura, Galeria Peana, Espacio Expectante, and others. The participatory contributions of local collectives and agents to the *matorral* project sparked multiple autonomous cultural productions in the fields of art, dance, and music performance, which brought environmental themes into the local cultural debate agenda. From an experimental and underground perspective, these productions reached the institutional sites



Figure 24 | Visitor engaging the Becoming-Bear installation. Photograph by Rodrigo Legorreta, 2018.



Figure 25 | Schoolchildren in playful interactions and explorations along the route and on the glade of the installations. Photograph by Rodrigo Legorreta, 2018.

of the metropolitan area's culture and ultimately gained international exposure.³

A program of site visits to explore the route through the *matorral* was inaugurated, involving schoolchildren from the public primary schools of the metropolitan area (Figure 25), who were guided in small groups through the trek by the artists and activists who contributed to the (co)creation. The guides facilitated the children's multisensorial experience of the ecosystem and engaged them in creative collective performances, in which they impersonated different animal species of the *matorral* to abandon a conventional perspective and venture out with new eyes. Although soon suspended due to external circumstances, the site visits brought the schoolchildren for the first time in contact with the identitarian, although now substantially obliterated, ecosystem that surrounds the city in which they live. The remarkable expansion of the environmental awareness among schoolchildren, relative to both local characteristics and the super-local values of the natural world, was recorded through a series of interviews conducted before and after the trek and synthesized in an area graph plotted over five axes, encompassing cognitive and cultural aspects.

The improved environmental awareness of the schoolchildren resulting from the excursion through the *matorral*, to a considerable extent, relied on the power and potential of playful interactions. According to a fundamental principle of ethology, young individuals of various species acquire skills through play that can be characterized as both adaptive, i.e., to self-retrofit in response to contextual conditions, and functional, i.e., to act upon external systems more efficiently. Adult individuals, instead, resort to playing to maintain and optimize the skills they have acquired. Playing, then, is a learning and training function that simulates, in a risk-free context framed by mental models, ordinary situations and events in which individuals of various species will encounter in life. In the elemental stages of evolution, by playing, the individual prepares for the primal functions of defense, predation, and mating. In evolved human cultures, such basic functions are transfigured into more elaborate interactions with the environment and with society; such

interactions are charged with semantic content, and as a result, a symbolic practice emerges that favors collaboration and the cumulative construction of a cultural niche. Classic writings such as Johan Huizinga's *Homo Ludens* (1938), Gregory Bateson's *A Theory of Play and Fantasy* (1955), and Jean Piaget's *Play, Dreams and Imitation in Children* (1963) elaborate on the fundamental function of the 'play-element' in the development of the sophisticated skills associated with the intricate use of language and cultural imaginary.

We hope that, by playing 'Becoming-Animal' in the *Matorral Simbiótico*, the schoolchildren of Monterrey have acquired analytical knowledge about local flora and fauna and the environmental dynamics that generously provide the large industrial metropolis where they reside with vital ecosystem services. Furthermore, we hope their shared environmental imaginary will now be populated by living figures of non-tame nature, diverse from the scanty or grotesque domesticated presences with which they are familiar. Eventually, we also hope that, through this individual and collective imaginary, their appreciation of the super-local values of nature has also developed, enabling them, as adult citizens, to contribute to a more aware, fair, and sustainable lifestyle in the future society of Monterrey. The ecological route of the *matorral* is intended as much for a real excursion as for an inner journey of the psyche. The transition in the landscapes resonates with the transition in one's attitude towards nature and society, culminating in the end station of the route, the *Circle of Contemplation*, where the visitors rest for a moment, reorganize their thoughts, but also open to new unknown paths that bifurcate heading down into the depths of the forested valley or up to the mountain woods. The playful interactions orchestrated along the route of the *matorral* are intended to make a modest contribution to the edification of a future community and society, hopefully, a bit more aware, fair, and sustainable than today.

Notes

- 1 The design and implementation of the set of landscape installations of the *Matorral simbiótico* are described in detail in: Pasini, R. (2019) *Symbiotic Matorral: Becoming-Animal and Other Explorations of the Cognitive Landscape*. Melfi, Libria.
- 2 A detailed description of the cognitive and geo-philosophical paradigms embedded in the design of the set of landscape installations is offered in: Pasini, R. (2020) 'La Résurgence de l'Archaïque au Cœur d'un Paysage Symbiotique Contemporain.' In: Bonzani, S. (ed.) *L'Archaïque et Ses Possibles*. Genève, Mētis Presses.
- 3 A detailed description of participatory and derivative activities is offered in: Pasini, R. (2022) 'Un'Esperienza Partecipata tra Paesaggio e Arte nel Messico Nord-orientale.' *BDC*, 22 (1), pp. 201-2016.

Acknowledgments

Full credits of the *Matorral Simbiótico* project. Project team: Roberto Pasini (lead), Patricio Garza Zambrano, Andrea Ramos Gándara, Fernanda Rosas Velasco (with: Martin Sanchez, Juan Reyna, Jorge Lozoya, et al.). Design: Pasini, Garza, Ramos, Rosas. Narrative: Pasini. Ecology: Garza. Botanic consultant: André Eduardo Estrada Castillón. Hand and digital drawings: Andrea Ramos Gándara. Choreographies: Rosas. Performers: Mestizos Crew. Implementation of site installations: Lgo Rodrigo Legorreta (stone works, land works, assemblages), Jaime Islas (metal works), Jopamec (metal engravings), *et al.* Workshops and tools: EJE - Estudio Jorge Elizondo. Video- and photo-documentation: Rodrigo Legorreta. Funds and support: Universidad de Monterrey, Parque Ecológico Chipinque.

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References

- Bateson, G. (1955). A theory of play and fantasy. *Psychiatric Research Reports*, 2, 39–51.
- Deleuze, G., & Guattari, F. (1987). *A thousand plateaus: Capitalism and schizophrenia* (B. Massumi, Trans.). University of Minnesota Press. (Original work published 1980)
- Farina, A., & Belgrano, A. (2004). The eco-field: A new paradigm for landscape ecology. *Ecological Research*, 19(1), 107–110.
<https://doi.org/10.1111/j.1440-1703.2003.00613.x>
- Huizinga, J. (1949). *Homo ludens: A study of the play-element in culture*. Routledge & K. Paul. (Original work published 1938)
- Naveh, Z. (2000). What is holistic landscape ecology? A conceptual introduction. *Landscape and Urban Planning*, 50(1–3), 7–26.
[https://doi.org/10.1016/S0169-2046\(00\)00077-3](https://doi.org/10.1016/S0169-2046(00)00077-3)
- Pasini, R. (2019). *Symbiotic matorral: Becoming-animal and other explorations of the cognitive landscape*. Libria.
- Pasini, R. (2020). La résurgence de l'archaïque au cœur d'un paysage symbiotique contemporain [The resurgence of archaeology at the heart of a contemporary symbiotic culture]. In S. Bonzani (Ed.), *L'archaïque et ses possibles* [The archaic and its possibilities] (pp. 117–130). MētisPresses.
- Pasini, R. (2022). Un'esperienza partecipata tra paesaggio e arte nel Messico nord-orientale [A participatory experience between landscape and art in northeastern Mexico]. *BDC. Bollettino Del Centro Calza Bini*, 22(1), 201–216.
<https://dx.doi.org/10.6093/2284-4732/9372>
- Piaget, J. (1962). *Play, dreams and imitation in childhood* (C. Gattegno & F. M. Hodgson, Trans.). W. W. Norton & Company. (Original work published 1945)
- von Uexküll, J. (1934). *Streifzüge durch die Umwelten von Tieren und Menschen: Ein Bilderbuch unsichtbarer Welten* [Journeys through the environments of animals and humans: A picture book of invisible worlds]. Verlag von Julius Springer.





Figure 26 | Details of the imaginary
landscapes in *The Dream* by Henri Rousseau,
1910.

Part II

The Course

Design course contributors
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Olivia Lensen, Fenne Manshande, Melissa Meertens, Sari
Naito, Janaina C.M. Schmittgens, Qianlin Xu, Yuhang Zhai



Figure 27 | Henri Rousseau, *The Dream*, 1910.

The course aimed to engage younger generations with the urgent realities of climate change through embodied experiences—by moving, sensing, and creating within the landscape itself. Through outdoor explorations, role-playing, and collective art-making, university students in landscape architecture, architecture, and urbanism collaborated with a primary school class to rediscover the Delftse Hout landscapes in the Netherlands across time—its past memories, present textures, and imagined futures. Together, as a final result, they wove ideas of play, climate transformation, and soil biodiversity into the (co)design and (co)creation of a shared outdoor installation: a living artwork that grew from their dialogue with the landscape. This evolving sculpture brought together teachers, parents, farmers, and the unseen multitudes of life beneath the soil, becoming a quiet testament to the interdependence of human and more-than-human worlds—a gesture of hope to dream (Figures 26-27) a possible future in a changing climate. The course is structured in three interconnected phases, each including a workshop with children to explore (Chapter 2), (co)design (Chapter 3), and (co)create (Chapter 4) the landscape through play.



Figure 28 | Exploring the landscape and filtering water through soil.
Photograph by Xuejing He, 2024.

2 | Exploring and Playing the Landscape

The Course

Laura Cipriani

The first phase, *Exploring and Playing the Landscape*, encouraged participants to engage with the site using their senses—walking, listening, and playing to gain understanding. University students began by mapping and analyzing the terrain, observing its forms and flows related to water, soil, and climate. When the students later met the children on-site, their perspective shifted from analytical study to shared exploration. Together, they walked, played, and told stories, discovering how water and soil cycles shape the landscape (Figure 28). Scientific observation merged with imagination, and play became a language for learning—a means to understand and care for the environment through direct experience. In this intergenerational dialogue between knowledge and wonder, the landscape itself became a teacher—offering lessons not just in ecology and climate but in the art of coexistence.



Figure 29 | Rotating grazing at Biesland Farm.
From “Google Earth,” 2019 (<https://earth.google.com/web/search/Delftse+Hout,+Delft,+Paesi+Bassi/@52.0262532,4.3946613,-4.52393122a,388.72331626d,35y,327.00001618h,0t,0r/>).

2.1 | Embracing the Site

Studying and Embodying Soil, Water, and Biodiversity

Laura Cipriani

The design course explored climate change through the interconnected themes of *soil* and *water*, examining them from both scientific and playful perspectives. The first assignment immersed university students in the field, encouraging them to experience the study area both as researchers and participants. The site included *Delftse Hout*, a green recreational district northeast of Delft, and the *Biesland Polder*, which includes *Stiltegoed*, a rural farming area that later became the location for outdoor workshops and installations. This territory, spanning the municipalities of Delft, Pijnacker-Nootdorp, and The Hague, carries the layered history of human and natural transformation.

Once a landscape of peat extraction, the area bears traces of centuries of water management, agriculture, and reclamation. Delftse Hout, with its lake *De Grote Plas* (Figure 35)—a remnant of sand excavations used for Delft's urban development—presents a landscape of contrast, where forest, field, and water intertwine.

Nearby lies the *Biesland Farm*, a biodynamic farming area (Figure 34) known for its ecological stewardship and as a living example of climate-resilient agriculture (Figure 29). Historically, the polder developed from swamp to farmland

through a complex process of reclamation. In the 15th century, drainage ditches were dug to reclaim wetlands for cultivation. Over time, as the soil subsided and became wetter, the region shifted from arable farming to livestock grazing. The extraction of peat in the 18th century further altered the terrain (Figures 30-32-33-36), transforming it into a vast peat bog, as depicted in Cruquius' 1721 map. By the late 18th century, drainage and redivision reshaped the area once more, creating the Biesland Polder and the higher-lying Bieslandse Bovenpolder. Despite these changes, livestock farming remains a defining feature of the landscape today (Figure 31).

The second assignment encouraged students to explore the site through both human and more-than-human perspectives, considering the agency of animals, soil, bacteria, plants, and other organisms. Through role-playing games, they embodied natural elements—*becoming a cloud, a river, a worm, a tree, a con, a peat bog*—learning to feel with and through the landscape. These embodied exercises fostered empathy, revealing the interconnectedness of living systems and promoting emotional engagement with climate change.

Soil, Water, and Biodiversity

Students explored how soil composition, water cycles, and biodiversity interact to shape the ecological identity of Delftse Hout.

Beneath its green surface lies a mosaic of clay with patches of remnant peat, a fragile yet vital carbon sink that quietly stores large amounts of

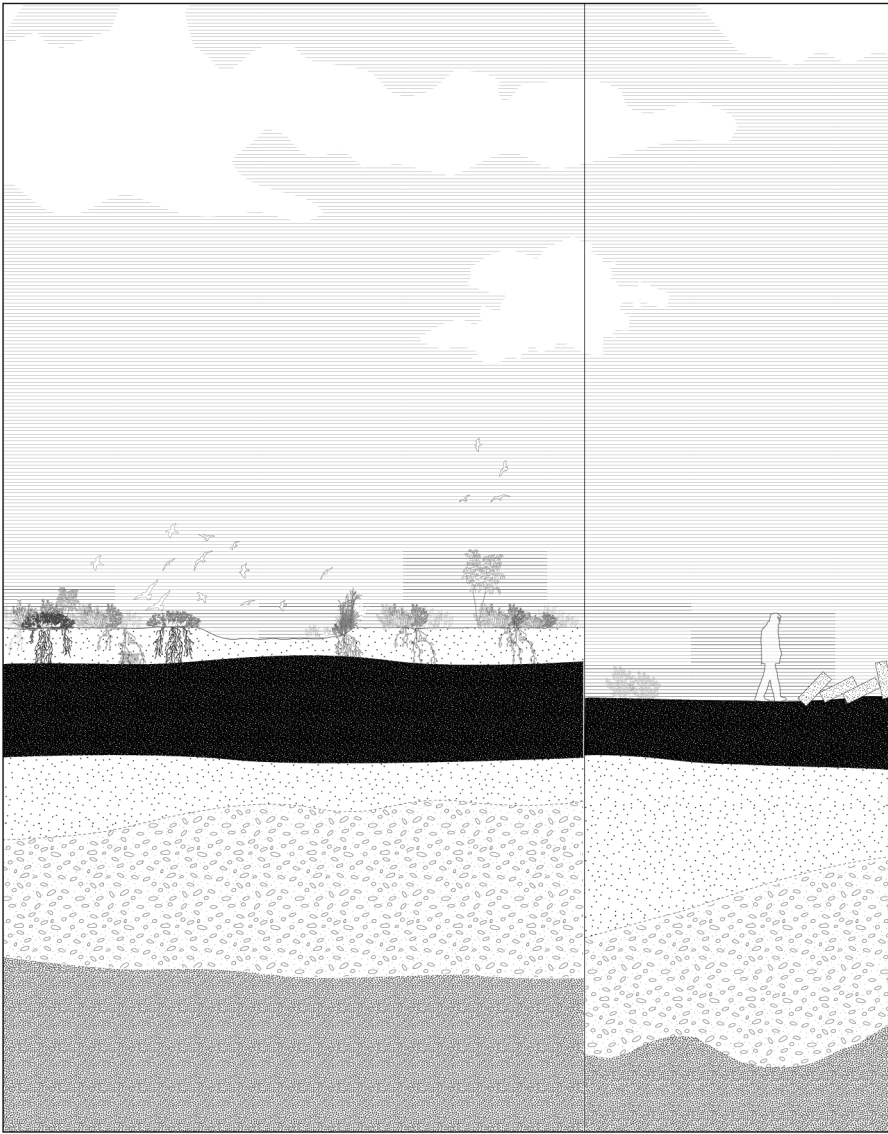
carbon dioxide. The area's clay-rich soils, however, retain water poorly, posing challenges as rainfall becomes more intense due to climate change. Restoring and expanding peatlands could enhance carbon storage and flood resilience, offering opportunities to promote sustainability and mitigate the effects of climate change. At the Biesland Farm, these ecological principles come to life. The farm embodies a circular system of production and regeneration, where nothing is wasted and every element—from livestock to crops to energy—feeds back into the overall system. Here, landscape management focuses on collaboration with natural processes rather than control: working with nature to maintain balance. Seasonal water levels are carefully managed to support both soil health and bird habitats. Crop rotation helps maintain soil fertility, and targeted grazing fosters biodiversity. These practices combine ecology, economy, and education into a single living system, demonstrating that sustainable landscapes are built through care, not extraction.



Figure 30 | The 18th-century map of the area shows Delft town on the left and, on the right, a 'black hole' where peat was extracted, indicating the location of the studio in Delftse Hout. Nicolaes en Jacob Kruikius, *Hooge heemraedschap van Delflant*, 1712.



Figure 31 | The studio area in Delftse Hout as it looks in 2024. The site has transformed into polders with a nearby lake.
Image by Laura Cipriani, 2024.



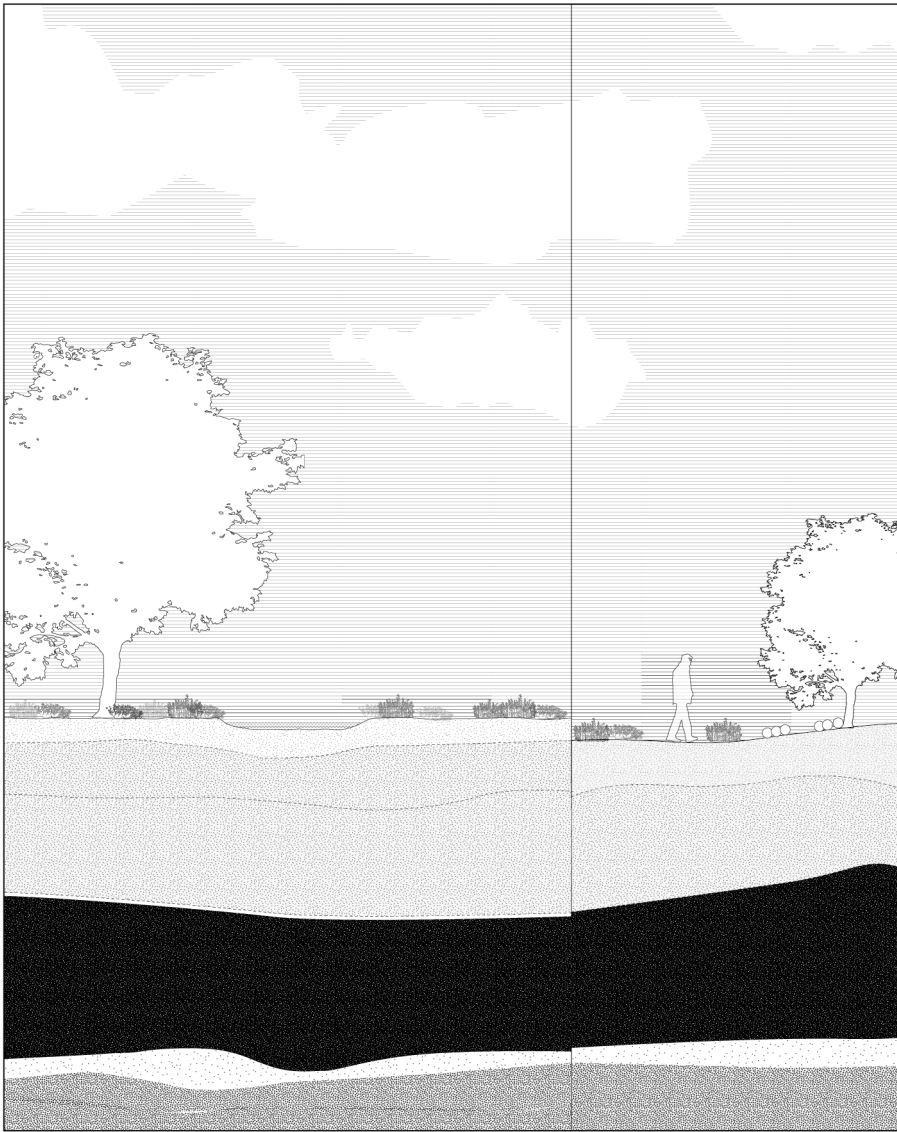
Before 1700

Around 1750



Present

Figure 32 | This section shows that peat extraction started before the 18th century in Biesland Polder, lowering soil levels and altering soil composition. Image by Jiaming Huang, Laura Cipriani, 2024.



Before 1700

Around 1750



Present

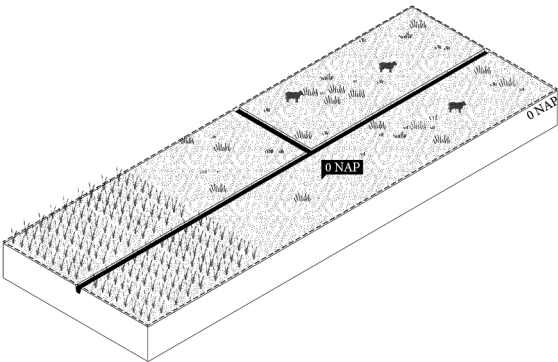
Figure 33 | Changes in soil levels near the lake from the 18th century to the present.
Image by Jiaming Huang, Laura Cipriani, 2024.



Figure 34 | Tree corridor along Bieslandseweg.
Photograph by Jiaming Huang, 2024.

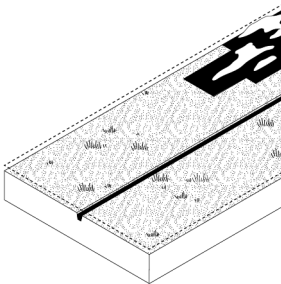


Figure 35 | View from the Side of De Grote
Plas. Photograph by Laura Cipriani, 2024.

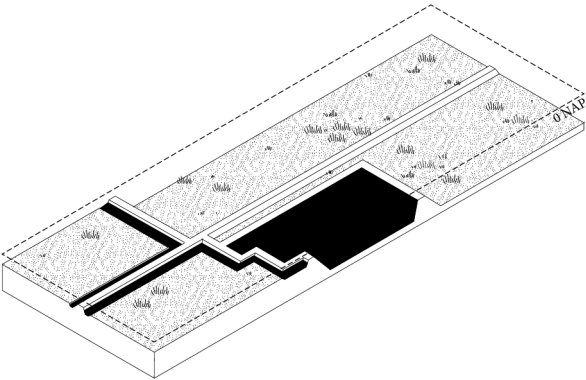


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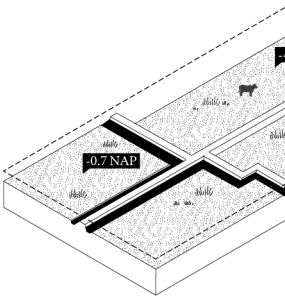
1500



1712



1855



1900

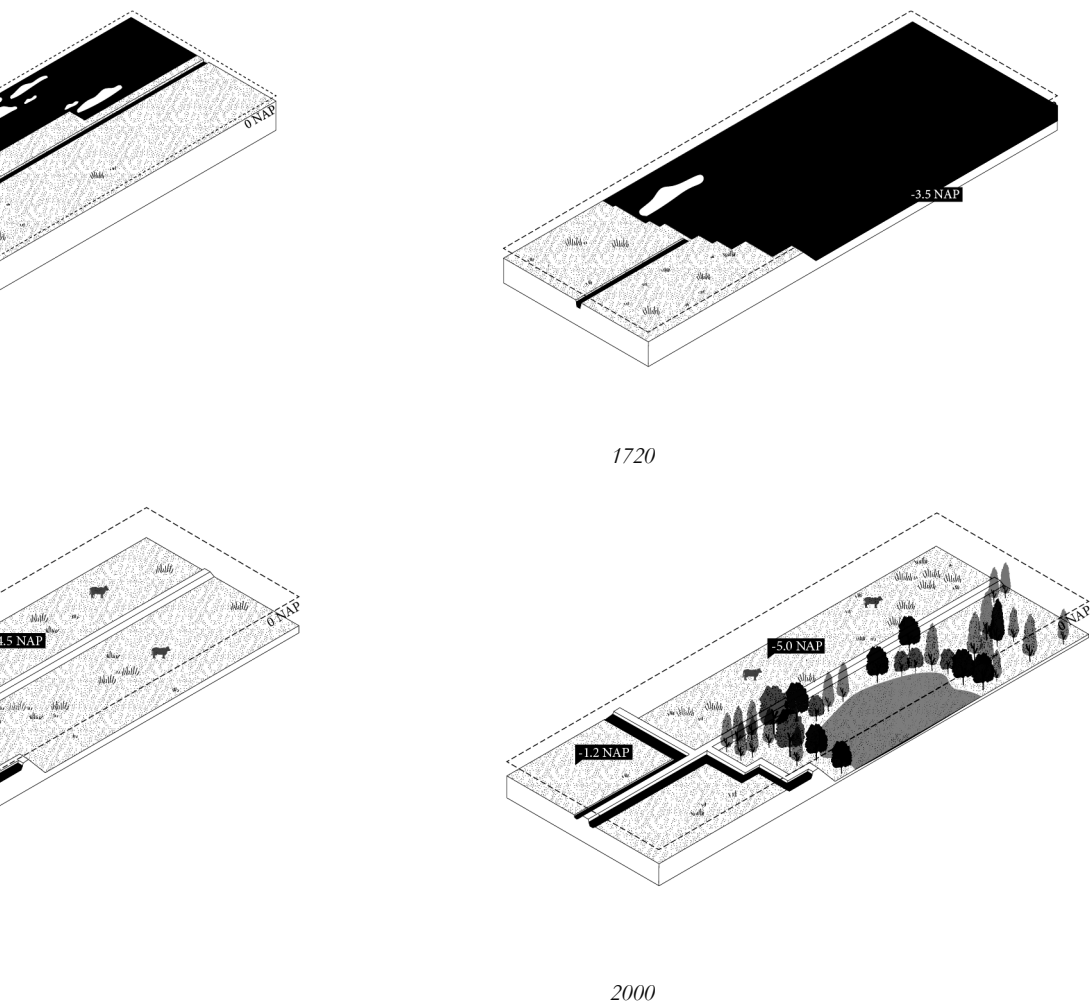


Figure 36 | Reclamation process of Biesland Polder. Image by Qianlin Xu, 2024.

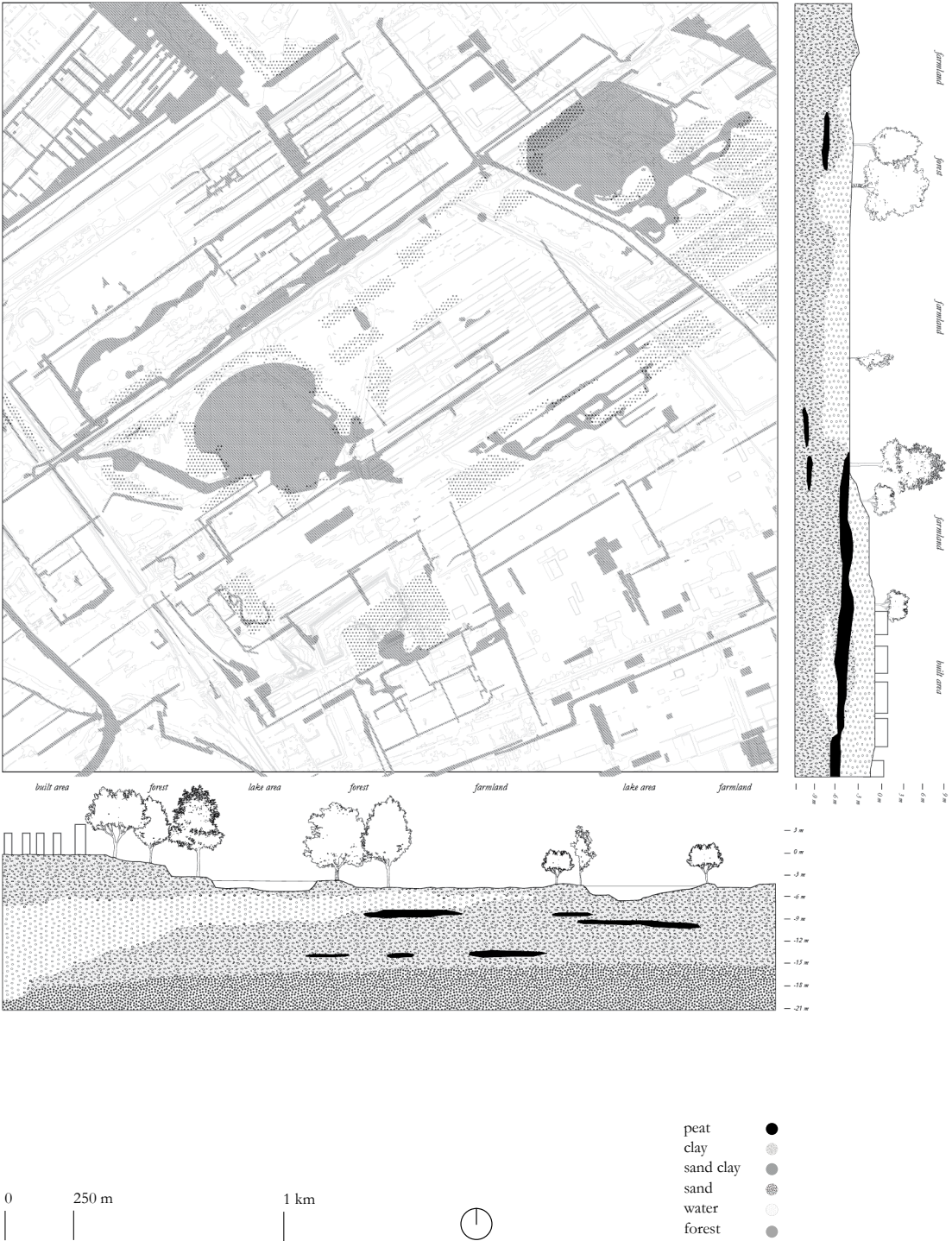


Figure 37 | Map and sections showing the left peat soil in Delfse Hout. From “Data en Informatie van de Nederlandse Ondergrond,” by Dinoloket, 2024 (<https://www.dinoloket.nl/ondergrondgegevens>).
Image by Fenne Manshande, 2024.

Soil Types

Mapping the soil revealed that geology and ecology are closely linked (Figure 37). Delftse Hout's clay-rich soil is mixed with deeper peat layers, left over from ancient wetlands. Although smaller, these peat pockets still make a significant contribution to carbon storage. However, they remain vulnerable: changes in temperature and rainfall can accelerate decomposition, releasing stored carbon. The combination of clay and poor drainage also raises the risk of flooding. Restoring peatlands and balancing soil and water levels are therefore essential strategies for climate adaptation.



Water Management

Water defines this landscape (Figure 38). Flowing from east to west, its movement is shaped by subtle variations in elevation and the deliberate positioning of weirs that control water levels between polders. In the southern area, water storage polders serve as a temporary storage during extreme events, holding water for days before releasing it. These engineered rhythms—rising and falling with the seasons—support both farming and wildlife.

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Figure 38 | Left | Map illustrating the water flow directions and the water management in Delftse Hout. Image by Melissa Meertens, 2024.
The photo in the background shows a lower water level in the meadow ditch.
Photograph by Jiaming Huang, 2024.



Figure 39 | Meadow grass habitat with higher water levels. Photograph by Jiaming Huang, 2024.

Water Level Management

Due to peat extraction, the area is located below sea level (about 5.30 meters below sea level). The local council manages the polder's water levels, balancing various interests. While natural cycles lower water levels in summer through evaporation, management practices reverse this rhythm. In the summer, maintaining higher water levels helps protect grasslands from drying out and supports habitats for small birds (Figures 39). In winter, lowering water levels promotes grass growth that supports livestock and migratory species. This dynamic balance between ecological and agricultural needs reflects the adaptive thinking needed in a changing climate (Figure 40).

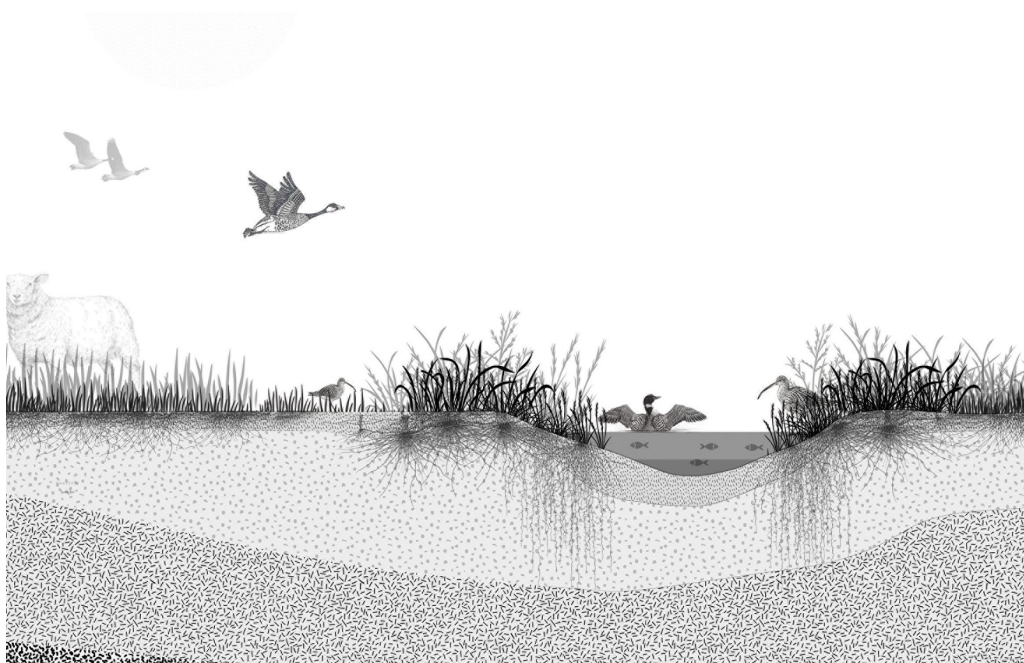


Figure 40 | The natural management of Biesland Farm includes regulating water levels during both summer and winter. Image by Jiaming Huang, 2024.

From July to January | Winter water level





Figure 41 | Cows in the polder at Biesland Farm. Photograph by Laura Cipriani, 2024.

Rotating Farming

Crop rotation functions as a form of ecological rhythm to sustain soil fertility. Each crop draws specific nutrients from the soil; planting the same crops repeatedly depletes these reserves (Figure 41). By rotating crops across seasons and years (Figure 42), farmers at the Biesland Polder maintain soil vitality and naturally reduce pest pressures. This deliberate choreography between plants and soil teaches a lesson in long-term thinking—one that students applied to their own design processes.

Year 01

Year 02

Year 03

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Root Vegetables | Carrot
Normal fertilization

Potato
Low fertilization

Bea
Normal fertilization

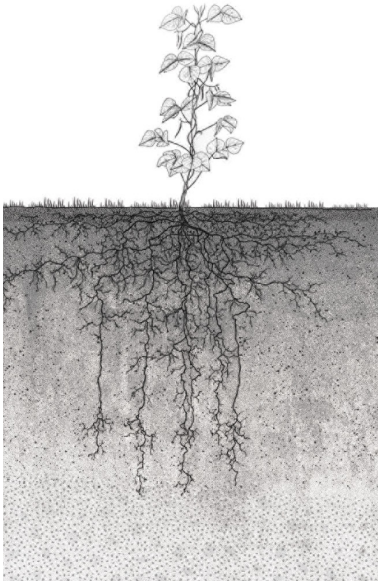
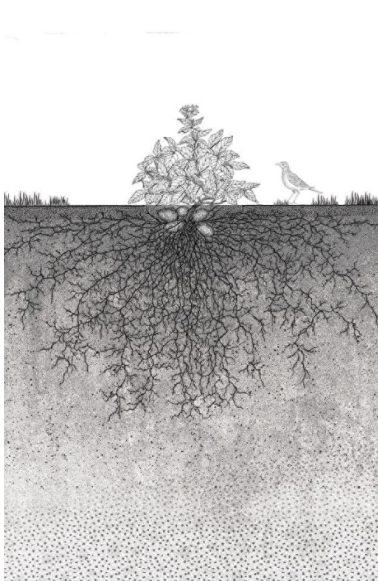
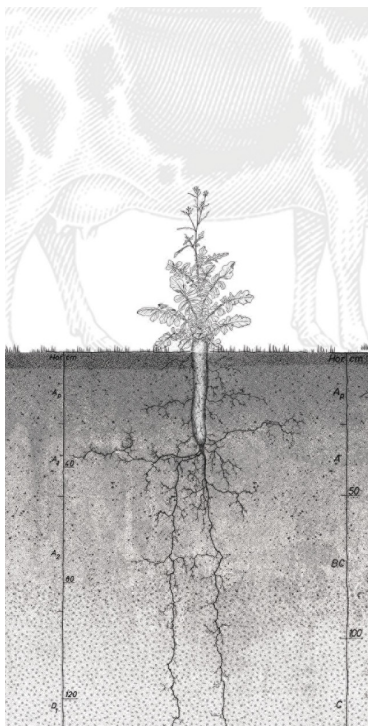
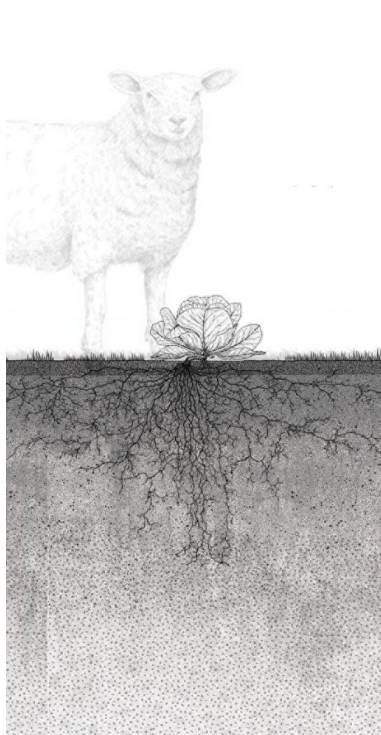


Figure 42 | Crop rotation at Biesland Farm operates on a six-year cycle. Image by Jiaming Huang, 2024.

Year 04

Cabbage

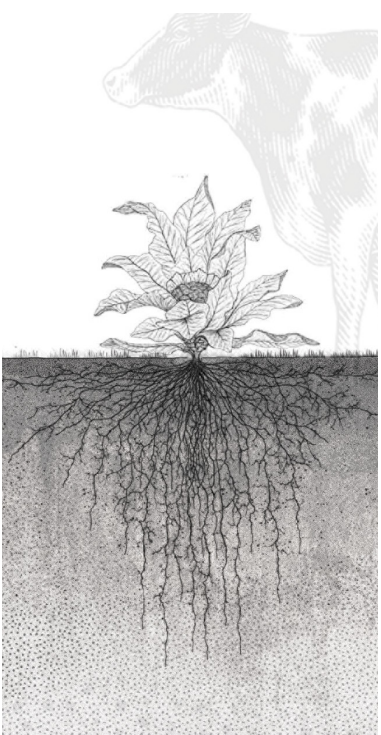
Intensive fertilization



Year 05

Leaf Vegetables | Lettuce

Low fertilization



Year 06

Fruits | Sweet Pepper

Intensive fertilization

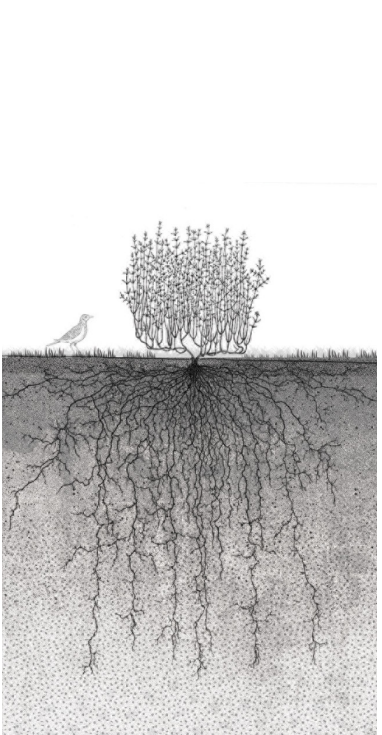
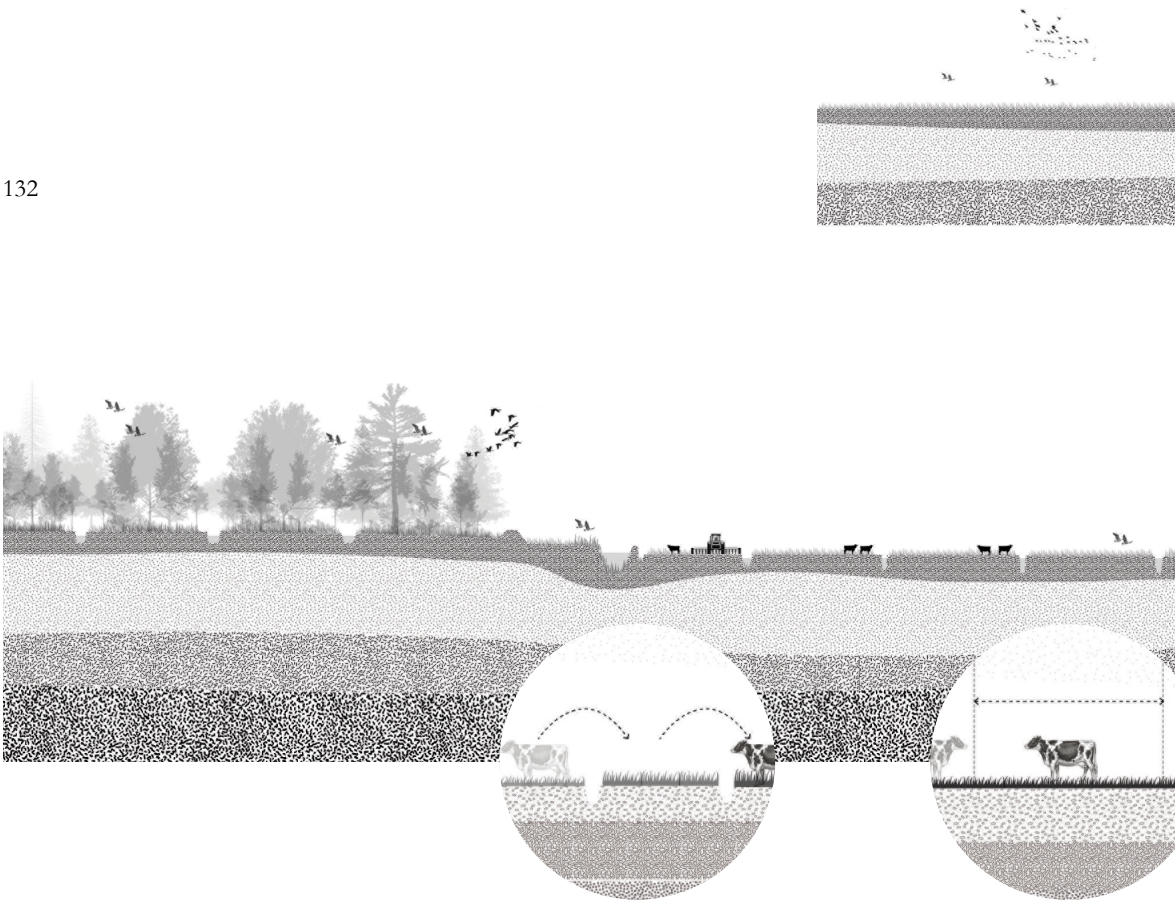




Figure 43 | Rotating grazing.
From “Google Earth,” 2021 (<https://earth.google.com/web/search/Delftse+Hout,+Delft,+Paesi+Bassi/@52.0283562,4.39481943,-0.38309158a,416.40573701d,35y,327.00116136h,0t,0r/>).

Mowing and Grazing Management

Diversity, both ecological and experiential, is central to landscape stewardship (Figures 43-44). Through targeted grazing and thoughtful mowing, the farm maintains a mosaic of grass heights and habitats. Some birds thrive in tall grasses, while others do better in shorter ones (Figure 45); alternating between mowing and grazing supports both. Even the timing of these actions is important—delaying the first cut along ditch edges allows herbs to bloom and insects to forage (Figure 46), providing shelter for chicks and small animals. Moles become farmers here (Figures 47-48). Their work helps aerate the soil, benefiting nearby plant roots. It also loosens the soil, enabling roots to grow more freely, which is especially vital for root vegetables. This subtle management turns everyday farming into an ecological collaboration.



*Alternating grazing
in various polders*

Raising one cow per hectare

Figure 44 | Strategies implemented at Biesland Farm for natural management. Image by Jiaming Huang, 2024.

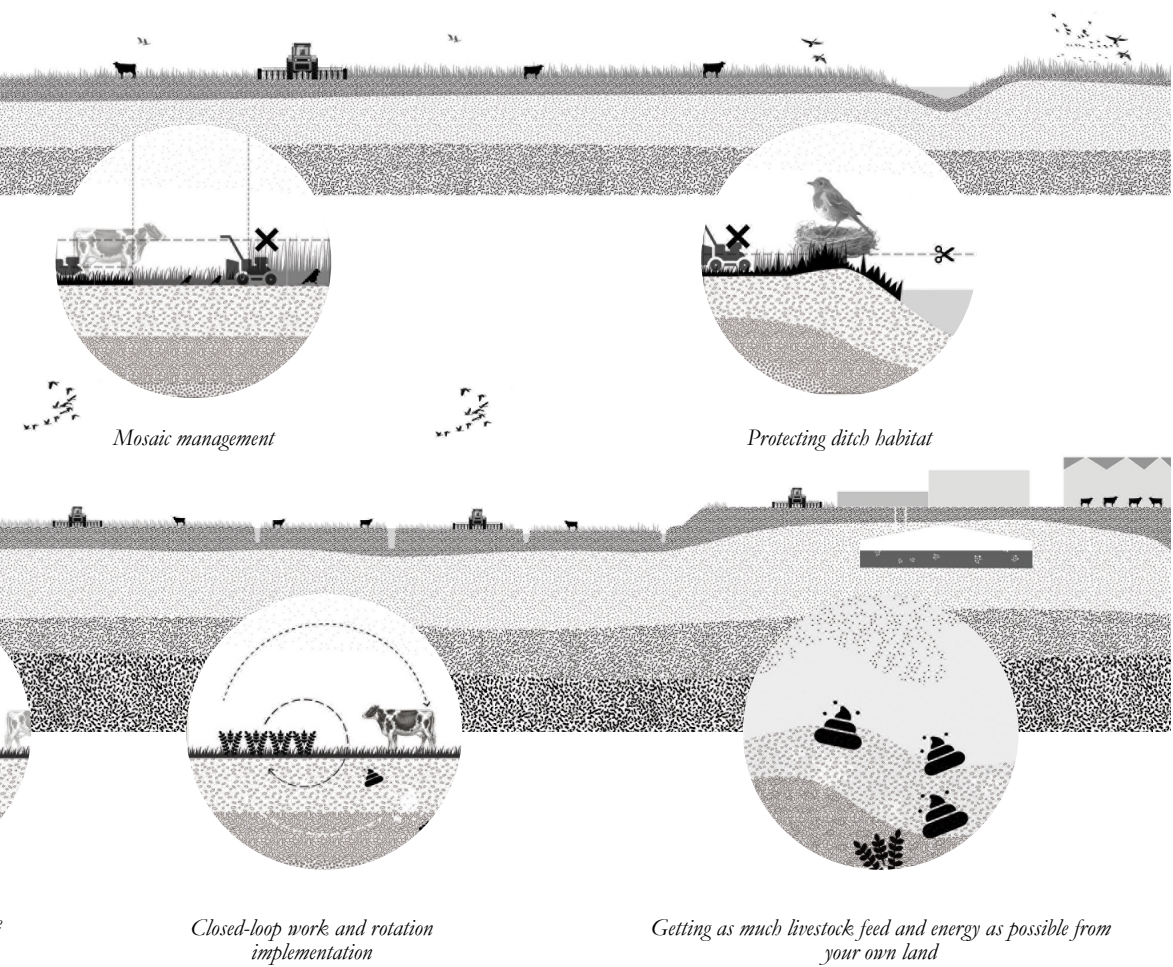




Figure 45 | Birdlife at Biesland Polder.
Photograph by Laura Cipriani, 2024.

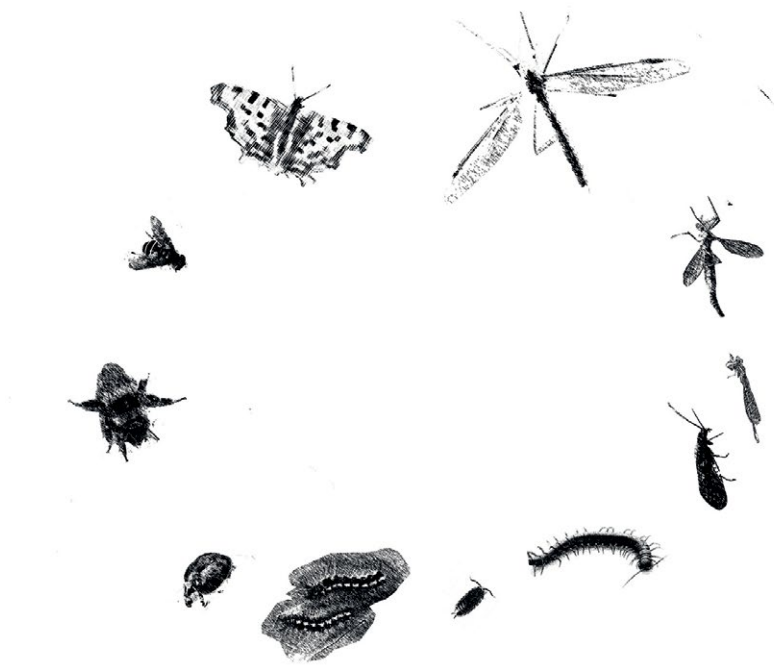


Figure 46 | Insects are vital for biodiversity.
Image by Sara van Keulen, 2024.



Figure 47 | The trail of a mole at Biesland Polder. Photograph by Laura Cipriani, 2024.



Figure 48 | The hole of a mole at Biesland Polder. Photograph by Laura Cipriani, 2024.



Figure 49 | Children pretending to be cows by gathering grass. Photograph by Laura Cipriani, 2024.

2.2 | ‘Becoming’ Landscape

The Explorative Workshop

Laura Cipriani

The Comenius course invited children to explore climate change through the living language of the landscape itself. The first outdoor workshop took place in Delftse Hout, where nearly thirty children arrived eager to play, explore, and read the site. Students sparked their imaginations to become animals and immerse themselves in the landscape. If you were a bunny, a cow, or a bird, which plants would you gather and eat (Figure 49)? Can we discuss vegetation, soil, and water? Can we collect soil and filter water? Can we experiment with soil permeability to see how water influences the landscape?

Wearing handmade animal crowns and carrying shovels, scissors, and curiosity, the children transformed into hares, cows, and birds. They wandered through fields and forests, gathering twigs, leaves, flowers, and soil. Through these playful activities, they experienced the biodiversity of Delftse Hout firsthand—feeling textures, noticing smells, and learning how soil filters water and nourishes plants. The line between learning and playing dissolved; discovery became embodied.



Figure 50 | Introductory meeting with the group of children and students interested in animals and wildlife. Photograph by Yuhang Zhai, 2024.

Becoming Animal

Participants were divided into three groups, each led by a university student, accompanied by a parent and a professor (Figures 50-52). Each group represented a familiar inhabitant of the Dutch polder (Figure 51): the cow, the hare, and the bird. These roles influenced how children moved and perceived the landscape. Hares explored meadows and burrows, cows wandered the grasslands and hedgerows, and birds observed from the trees and open skies.

As they explored, the children collected plant materials associated with their animal's habitat—grasses, flowers, branches, fruits, and bark. Later, they created collages that showcased their discoveries (Figures 53-54). Through discussion and guidance from the students, they identified plant species, described their textures and colors, and shared what their chosen animal might eat, build, or find shelter beneath. In this way, ecology became personal, tangible, and narrative.





Figure 51 | Left | Sheep grazing in the meadow.
Photograph by Yuhang Zhai, 2024.

Figure 52 | Above | Exploring and playing in the
landscape by collecting grass for cows.
Photograph by Yuhang Zhai, 2024.



Figure 53 | Creating an artwork with the gathered plants and describing the species.
Photograph by Yuhang Zhai, 2024.



Figure 54 | Collected plants.
Photograph by Yuhang Zhai, 2024.



Figure 55 | Collecting soil for water filtration.
Photograph by Xuejing He, 2024.

Becoming Water and Soil

Another group focused on the hidden systems beneath their feet and around them—water and soil. Their task began with exploration and collection (Figures 55-56-57), followed by an experiment known as the ‘bottle game.’ Using the natural materials they gathered—leaves, twigs, and soil—they built layered filters to clean water (Figures 58-59-60). Through trial and observation, they learned how different substances interacted with water, which filtered best, and which allowed impurities to pass through. This simple, hands-on activity revealed complex concepts: filtration, permeability, and the cycles of renewal that sustain life.

What if you are water instead? Where do you want to flow? The workshop concluded with a creative ritual—water that carves its own paths, winds around, and eventually returns to its source lake (Figures 61-62).





Figure 56 | Left | Collecting soil.
Photograph by Xuejing He, 2024.

Figure 57 | Above | Picking mosses and soil
samples. Photograph by Xuejing He, 2024.



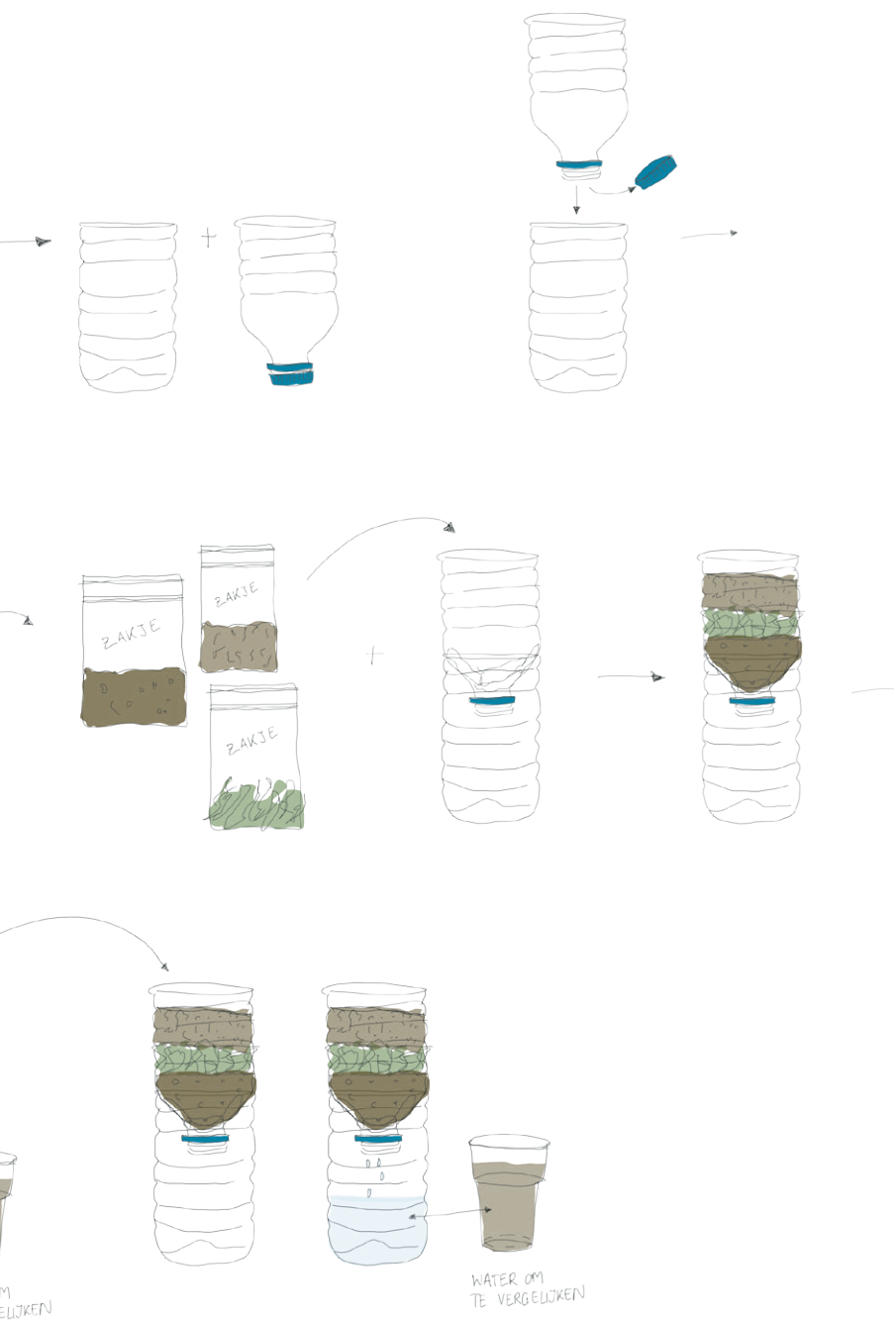


Figure 58 | The instruction sheet for the bottle game explaining how to filter water through soil.
Image by Janaina C.M. Schmittgens, 2024.



Figure 59 | The process of filtering water through soil. Photograph by Xuejing He, 2024.



Figure 60 | Filtering water through soil.
Photograph by Xuejing He, 2024.





Figure 61 | Left | Building a canal to redirect water back to the lake and exploring fluid dynamics with artistic flair. Photograph by Xuejing He, 2024.

Figure 62 | Above | Constructing the canal. Photograph by Xuejing He, 2024.



Figure 63 | Some results from the red-green dot game about climate crises and hopes.
Image by Sari Naito, Laura Cipriani, 2024.

3 | (Co)Designing the Landscape

The Course

Laura Cipriani

The second phase—*(Co)Designing the Landscape*—marked a shift from observation to collective imagination. After exploring the site and its ecological dynamics, participants shifted their focus toward visualizing future possibilities. This phase involved a series of collaborative workshops with university students, elementary school children, and local stakeholders, including the land-owning farmer. In this process, play was more than just an activity; it was a method—a mindset that fostered openness, dialogue, and experimentation.

The work began with students and the farmer developing a shared vision for the area's climate transition. Together, they reflected on how climate change could impact the agricultural landscape and discussed strategies for adaptation and mitigation that balanced ecological understanding with practical experience.

These initial design conversations laid the groundwork for the next phase, where children were encouraged to share their own perspectives. In an indoor workshop, students introduced the site and its climate challenges, prompting children to respond through discussion, drawing, and playful activities (Figures 63-64). The room became a space for exchange, where ideas flowed



Figure 64 | Adding, transforming, and (co)designing the site and the farm with children. Photograph by Laura Cipriani, 2024.

freely—some based on observation, others sparked by imagination. Through (co)drawing and informal conversations, children shared their perceptions of the landscape and how they envisioned its future. Their interpretations emphasized sensory and emotional connections to the place, complementing the analytical approaches of the university students.

Building on this dialogue, students translated the children's ideas into a series of small-group design proposals—playful climate installations that combined environmental insight with creative expression. These designs were later presented to the class and an external tutor, resulting in a collective decision on which concept to develop further and ultimately implement.

During this phase, the design process became an educational journey—a shared language where participation, dialogue, and creativity intertwined—reminding everyone that landscapes are shaped not only by hands but also by the dreams we dare to imagine together.



Figure 65 | Forest edge overlooking Biesland
Farm in Delftse Hout.
Photograph by Laura Cipriani, 2024.

3.1 | (Co)Designing with the Farmer

The Landscape Vision

Laura Cipriani

The collaboration with the farmer provided an opportunity to link design thinking with lived knowledge of the land. Together, the students and the farmer explored key questions: *How will climate change affect this agricultural region—its soils, crops, and habitats? What actions can be taken in the short and long term to strengthen its resilience?*

Two complementary design visions emerged from this exchange. The first focused on enhancing biodiversity and ecological connectivity, while the second explored transforming agricultural practices through strip cropping and paludiculture as strategies for climate adaptation and sustainable production.

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The Biodiversity Vision

From a landscape perspective, this vision presented a development plan for the Delftse Hout and Biesland Polder area (Figure 65), enhancing a crucial green corridor connecting Delft, Pijnacker, and Nootdorp. The proposal acknowledged the area's ecological, recreational, and cultural importance for the surrounding urban communities. The plan (Figures 66-67-68) was guided by three main principles: maintaining ecological balance, supporting

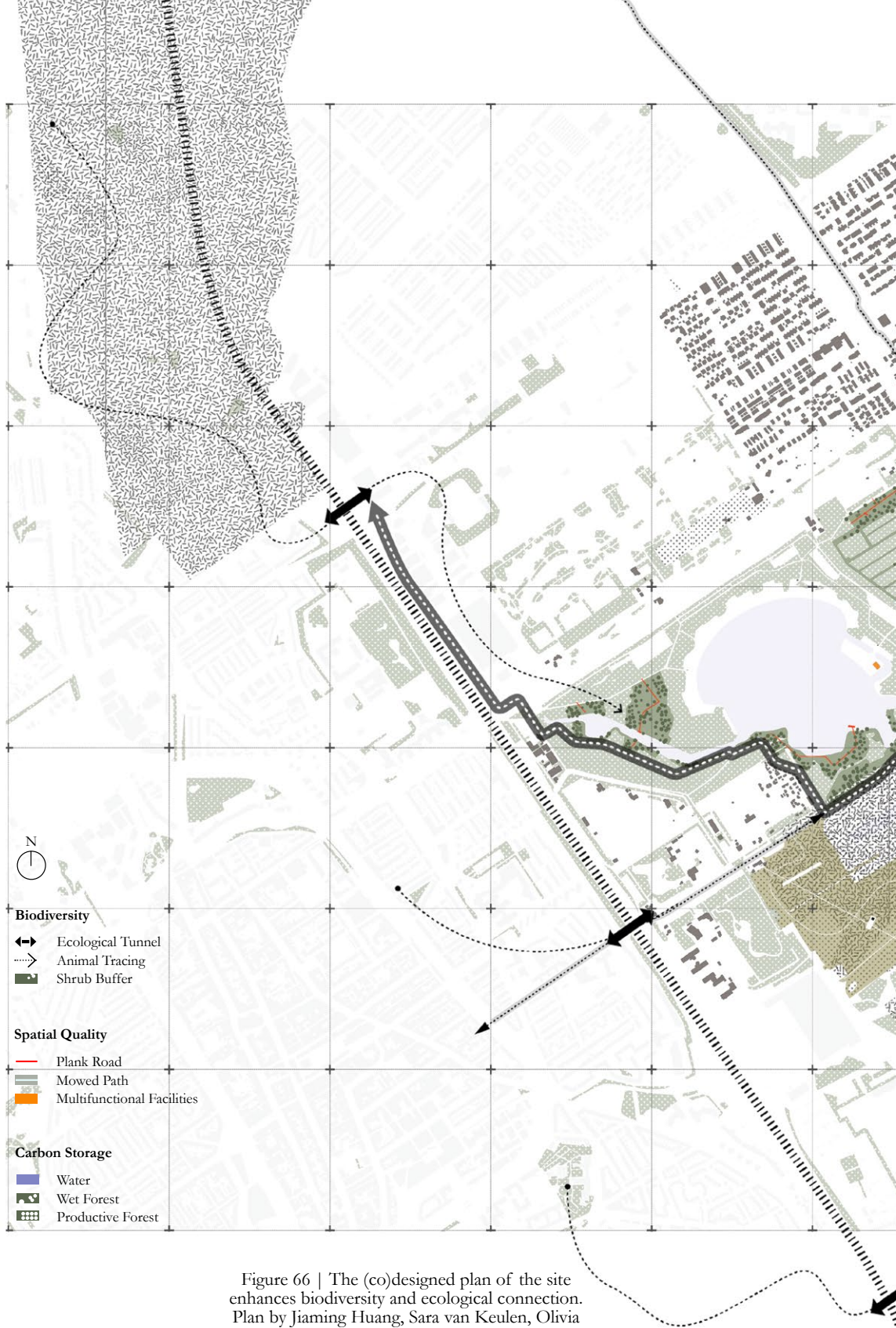


Figure 66 | The (co)designed plan of the site enhances biodiversity and ecological connection.
Plan by Jiaming Huang, Sara van Keulen, Olivia Lensen, Qianlin Xu, and Yuhang Zhai, 2024.





Figure 67 | A detail of the plan: biodiverse farming and new forests are planned. Plan by Jiaming Huang, Sara van Keulen, Olivia Lenssen, Qianlin Xu, and Yuhang Zhai, 2024.

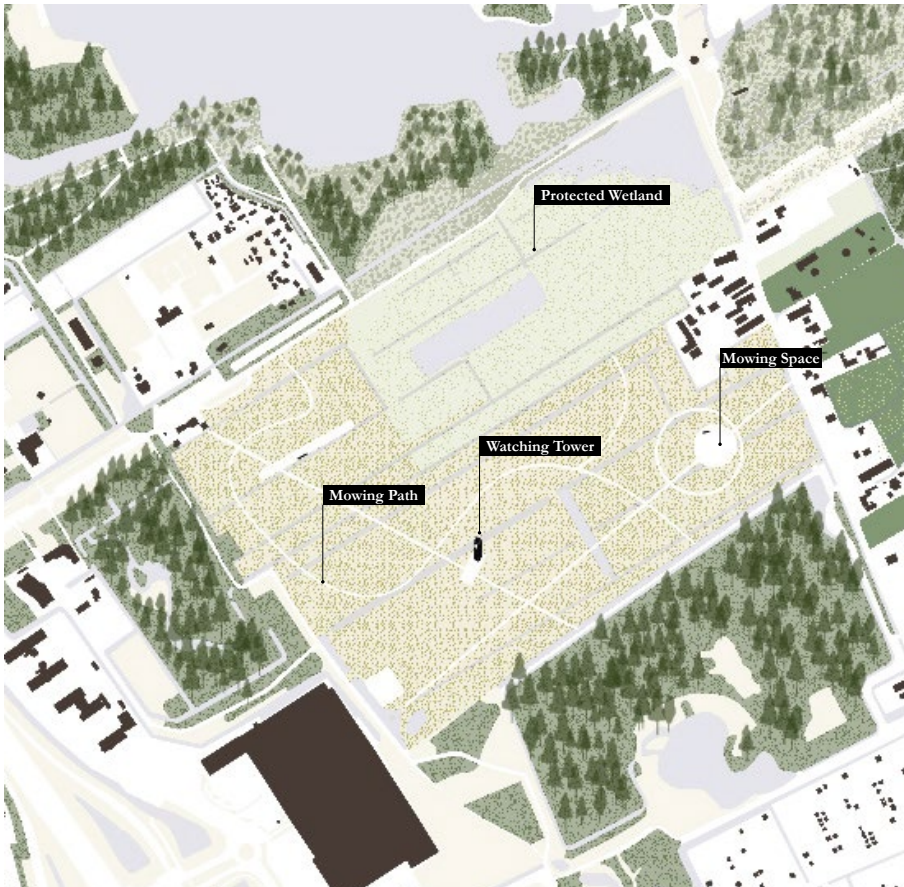


Figure 68 | A close-up of the wetlands and recreation park planned. Plan by Jiaming Huang, Sara van Keulen, Olivia Lensen, Qianlin Xu, and Yuhang Zhai, 2024.

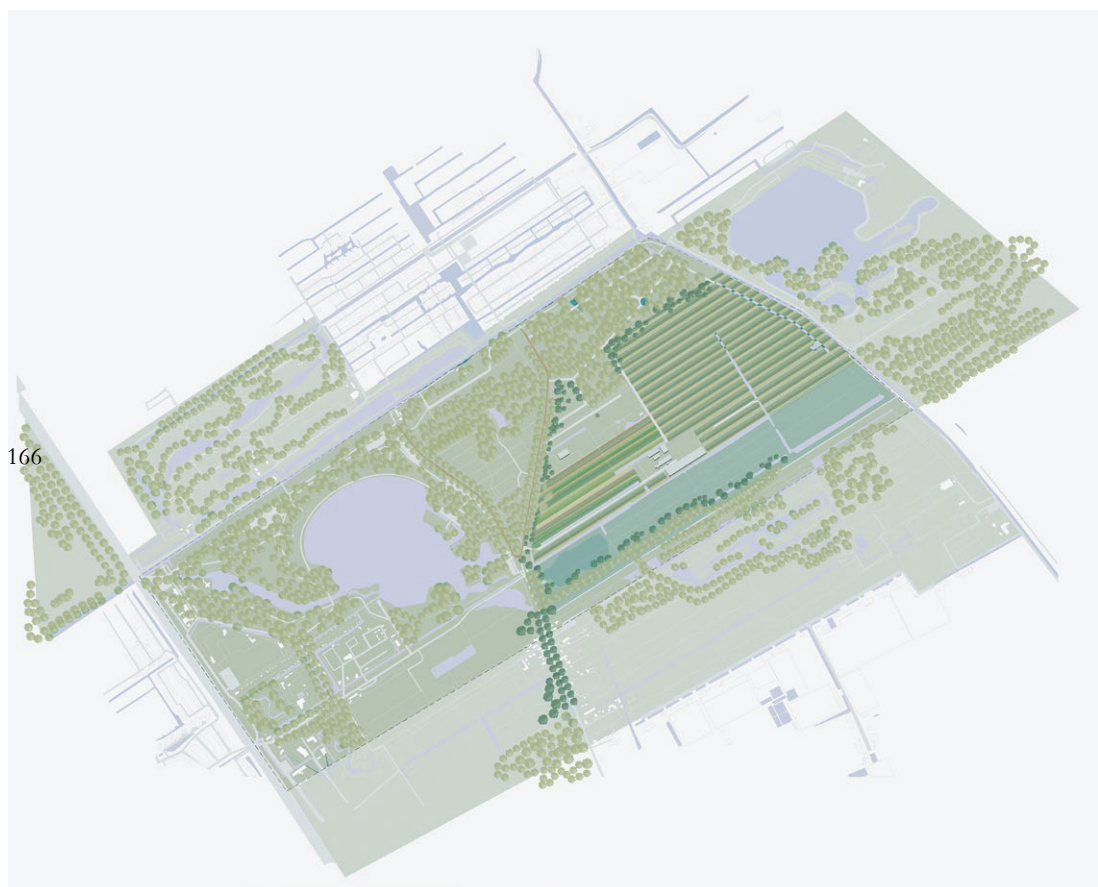


Figure 69 | The (co)designed plan for peat regeneration developed by a second group of students. Plan by Janaina Schmittgens, Xuejing He, Fenne Manshande, and Melissa Meertens, 2024.

sustainable development, and reducing human disturbance. Based on analyses of hydrology, soil quality, vegetation, and local fauna, students identified potential climate-related challenges and developed six strategies for both the short and long term to improve biodiversity, enhance carbon storage, increase spatial quality, and promote multifunctionality. These strategies were included in a master plan aimed at creating a more resilient and biodiverse landscape.

The Peat Vision

This plan proposed a comprehensive strategy for transforming agricultural practices in Delftse Hout and Stiltegoed (Figure 69). The design focused on enhancing soil health, promoting biodiversity, and generating economic opportunities through agricultural diversification. Techniques such as strip cropping and paludiculture were central to this plan, enabling the cultivation of wetland crops that can thrive under higher water levels while reducing greenhouse gas emissions. Besides ecological benefits, the approach supported water purification, prevented soil degradation, and provided habitats for wildlife. Economic resilience was promoted through the introduction of high-value crops, including reeds and medicinal plants, while integrating agroforestry and animal grazing to boost recreational opportunities. These activities helped create a multifunctional landscape where production, recreation, and education coexist, encouraging local communities to engage directly with the land.

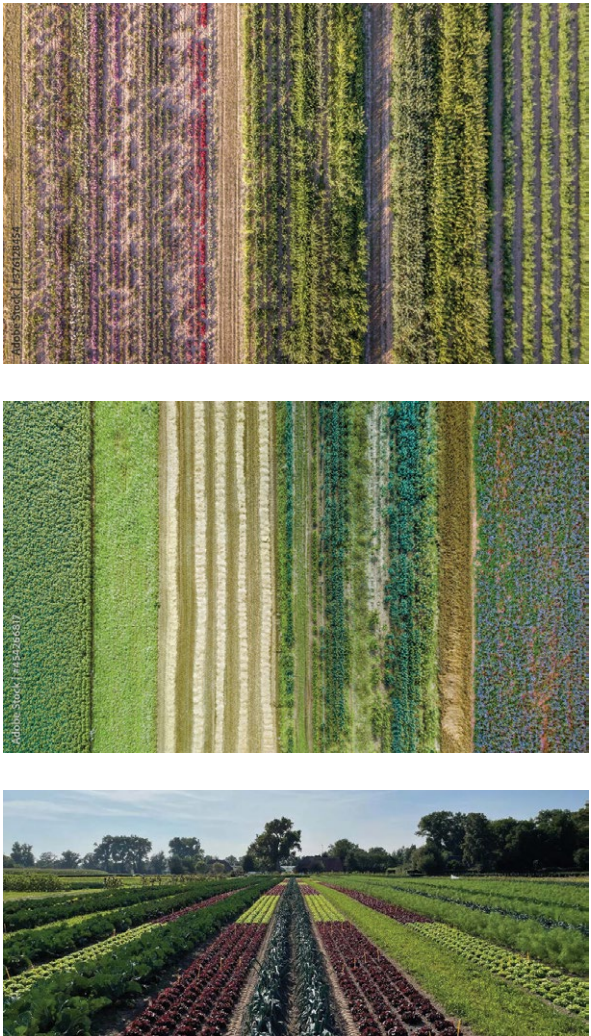


Figure 70 | The plan envisions strip farming.
Image by Xuejing He, 2024.

Strip farming was proposed as a spatial, aesthetic, and ecological framework (Figure 70). Alternating strips of crops and grasses established a gradient of habitats that increased biodiversity, improved water management, and created an ecological corridor extending from east to west across Delftse Hout and Stiltegoed. Seasonal planting added variety and aesthetic value, while limited vehicle access promoted a safe and welcoming environment for families and nature enthusiasts. The design showed how small-scale interventions can combine ecological and social goals within a unified landscape vision, gradually adapting to the uncertainties caused by climate change.



Figure 71 | Children in the second indoor workshop are playing and working with the site toolkit. Photograph by Xuejing He, 2024.

3.2 | (Co)Designing with Children

The Diorama Workshop

The second workshop took place indoors at the Groen van Prinsterer School in Voorburg, where children actively engaged in the design process. It is based on the idea that creative play can serve as a powerful way to explore environmental issues and inspire collective imagination.

Games and Toolkits

Two main activities structured the session: the first, titled *The Red Dot of Climate Crisis* and *The Green Dot of Climate Hope*, and the second, a game-diorama model depicting Delftse Hout and the Biesland Polder (Figure 71).

In the first activity, each child received two sheets of paper—one with a red dot symbolizing the negative impacts of climate change, and another with a green dot representing positive actions or outcomes (Figures 77-78-79-80). They were encouraged to illustrate their thoughts on each, visualizing both challenges and hopeful futures. This activity promoted reflection on climate change through drawing and storytelling, revealing how children understand and emotionally connect with environmental changes.

The second activity involved children using toolkits with paper boxes, colored pencils, glue,

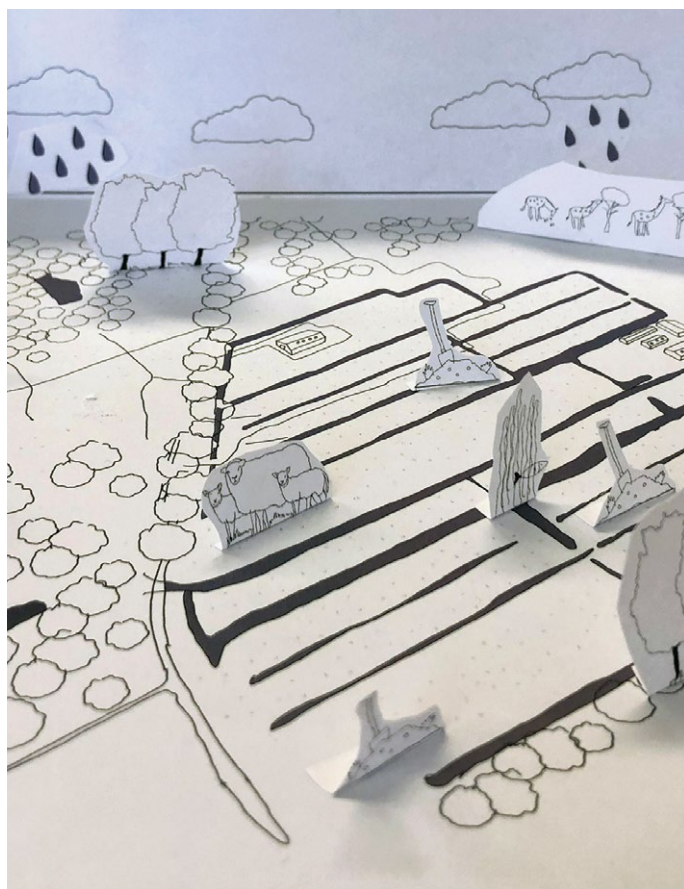
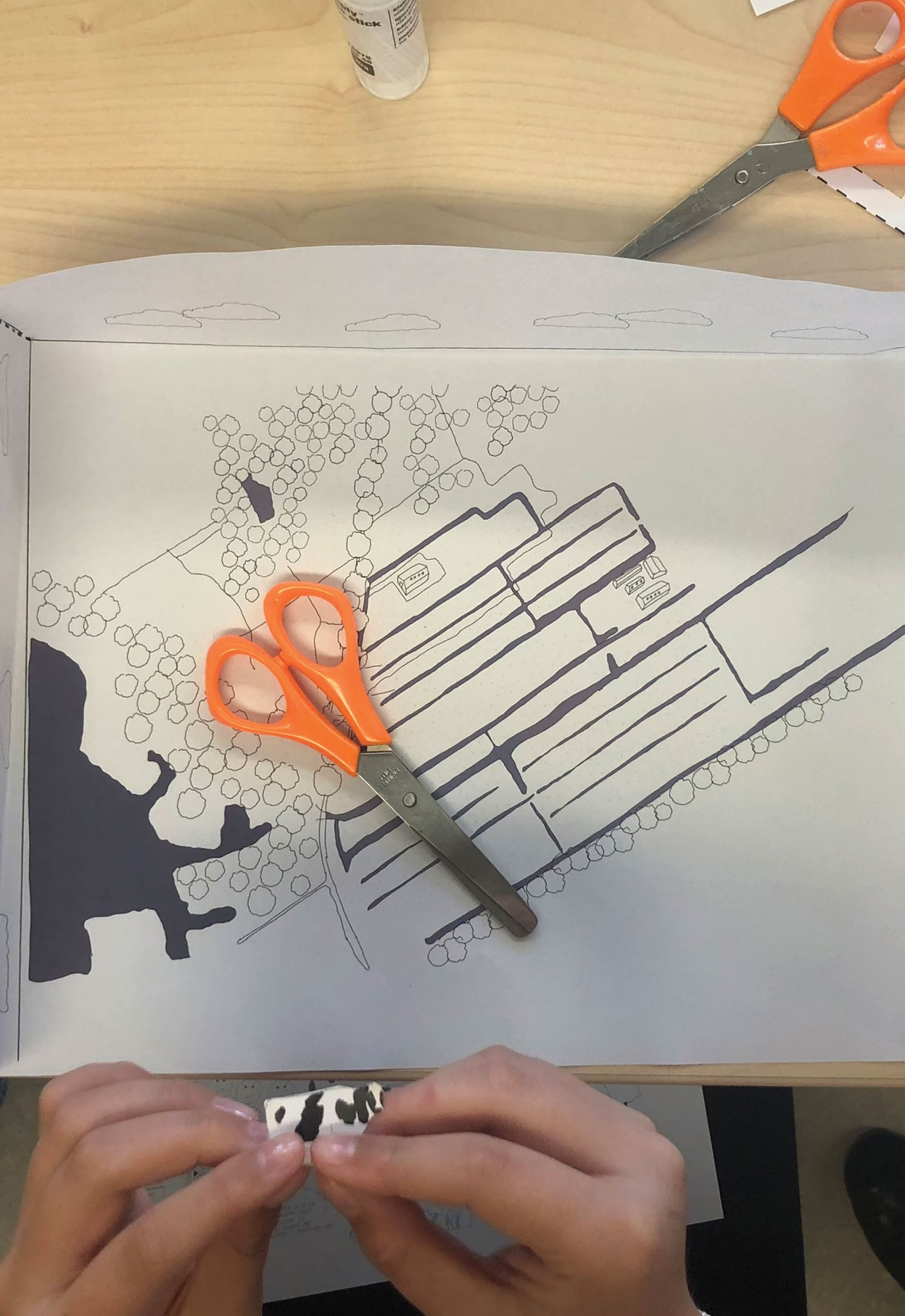
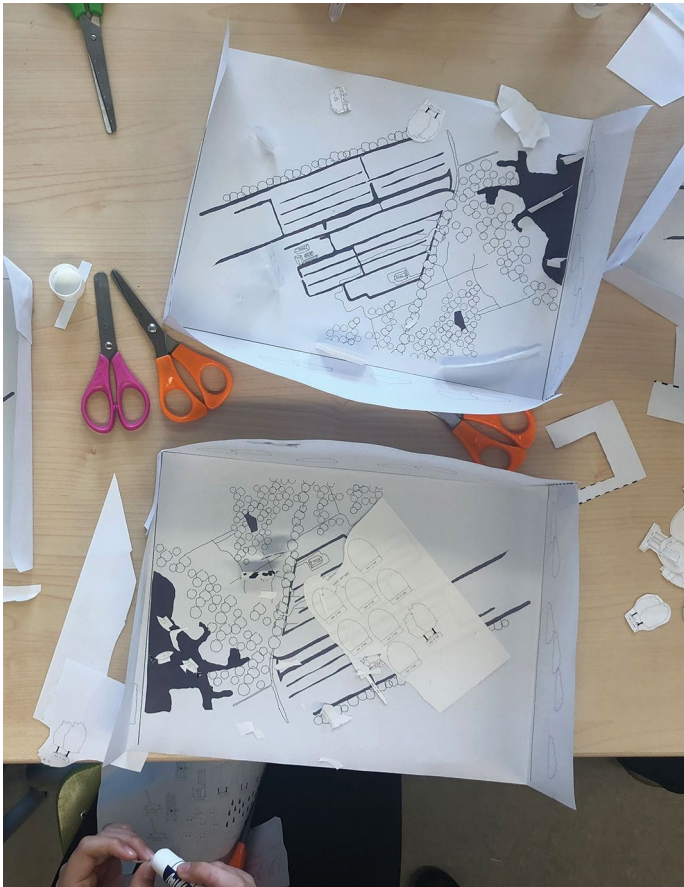


Figure 72 | The site adapts to climate change times. Photograph by Xuejing He, 2024.

and small figures to create miniature landscape models of Delftse Hout (Figures 72-73-74-75-76). They designed tiny dioramas depicting imagined future environments. Their creations were playful and insightful, featuring new species adapted to climate change—fish with long legs to cross dry land, rabbits with wings to escape rising heat, and anteaters that stored and released water to cool the ground. These imaginative designs expressed adaptation, resilience, and coexistence, blending scientific ideas with creative thinking. Ultimately, university students collected the children's artworks and models to incorporate into the next stage of design development. This process demonstrated how collaborative and playful learning can deepen understanding, foster empathy, and broaden the vocabulary of landscape design. Reflecting on this phase, it's clear that (co)designing with children not only enriched the design outcomes but also challenged traditional educational boundaries. By using imagination as a tool for inquiry, participants learned that future landscapes are not just technical problems to solve but shared stories to imagine together.





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Figure 73 | Above | The landscape box toolkit displaying the farm's site. Photograph by Xuejing He, 2024.

Figure 74 | Left | Adding, transforming, and (co)designing the site and the farm. Photograph by Laura Cipriani, 2024.

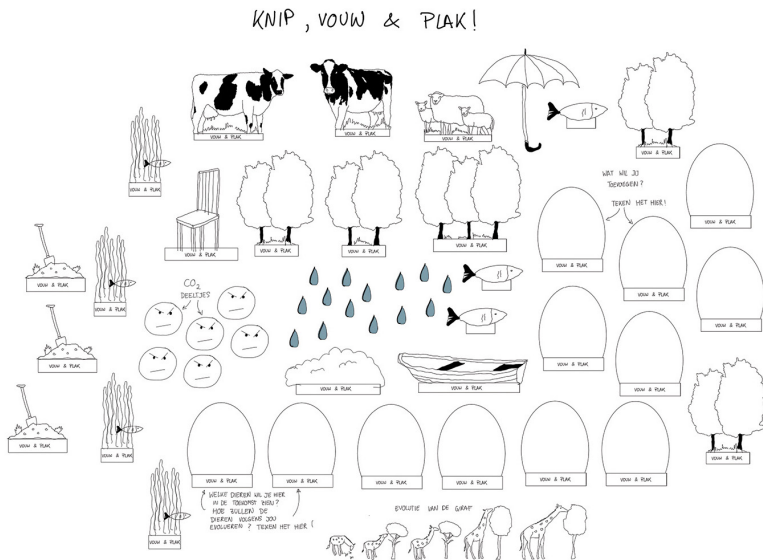
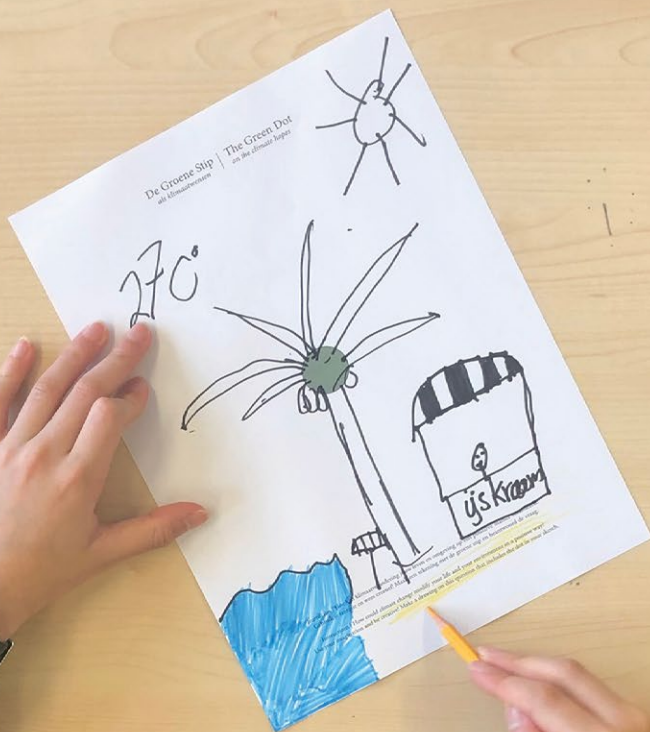


Figure 75 | 'The toolkit for leaving creatures to insert into the paper model box.
Image by Sara van Keulen, 2024.



Figure 76 | Children removing parts from the kit. Photograph by Xuejing He, 2024.



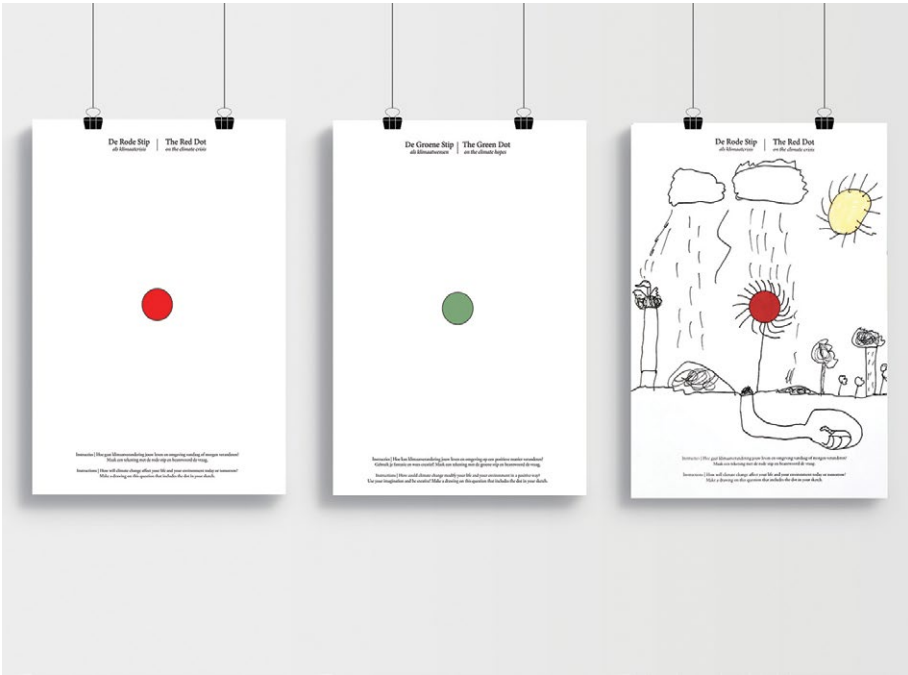


Figure 77 | Left | Children working on the green dot game of climate hope.
Photograph by Laura Cipriani, 2024.

Figure 78 | Right | Some page samples of the red dot representing the climate crisis and the green dot representing climate hope.
Image by Laura Cipriani, 2024.



Figure 79 | A child playing the green dot game.
Photograph by Laura Cipriani, 2024.

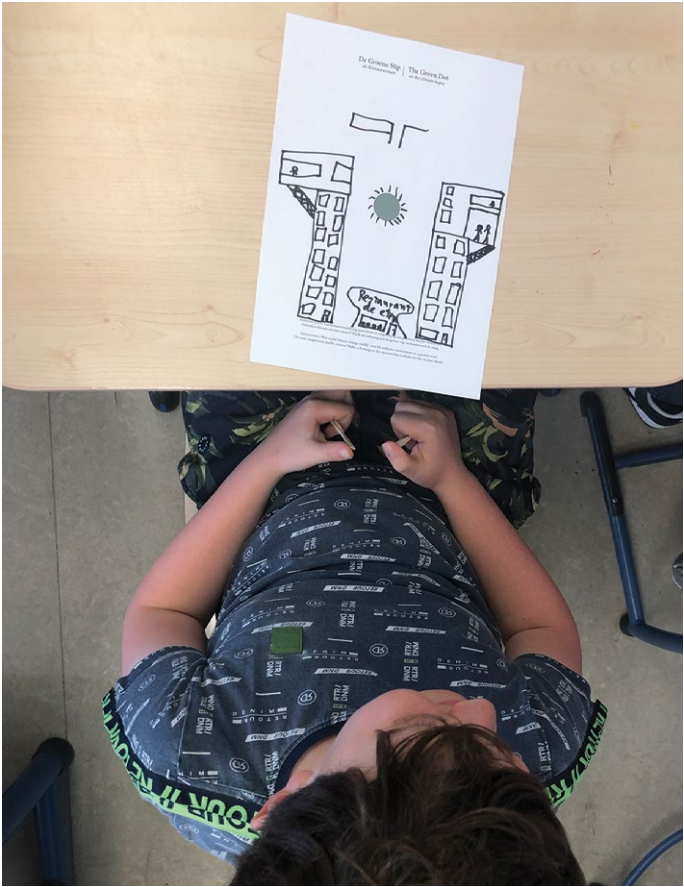


Figure 80 | A child working on the green dot game. Photograph by Laura Cipriani, 2024.



Figure 81 | The poster for the final event titled *Whispering Wilderness*. Image by Laura Cipriani, 2024.

4 | (Co)Creating the Landscape

The Course

Laura Cipriani

The final phase—*(Co)Creating the Landscape*—turned ideas and drawings into a tangible form. University students collaborated to implement the installation on-site, transforming the chosen design into a lively, playful installation at Stiltegoed in Delftse Hout. This stage focused on refining technical details, preparing for the (co)creation event, and coordinating the materials and logistics needed to bring the project to life. The intention was to create a shared moment of making, inviting children and parents to participate in the act of construction and to experience the joy of shaping something together.

The third workshop became a celebration of collaboration. On-site, children, parents, and teachers gathered around the evolving installation, testing the climate games designed by the students and engaging in small acts of (co)creation. The atmosphere was one of discovery and play, where learning happened through movement, conversation, and shared curiosity. Before and after the activities, children reflected on their experiences using simple questionnaires, helping the team understand how their awareness and understanding of climate change had grown. The event ended with a performative dance in the landscape—an improvised choreography

where bodies mimicked animals' movements. In that moment, play became both method and meaning, echoing through the field as a reminder that learning, like the landscape itself, is always in motion.

4.1 | Whispering Wilderness

The Installation Workshop

The on-site construction day marked the end of the Comenius course *Climate Change as a Game*, bringing together university students and primary school children. Guided by insights from earlier workshops, the teams refined a set of installation proposals and ultimately chose one to prototype and build for the closing event: *Whispering Wilderness* (Figures 81-86). This final workshop became a collective act of imagination. The installation invited children, parents, teachers, and even the unseen inhabitants of the soil to explore possible futures of carbon and care. Through wild play choreographies, participants traced a path through the polder and forest, each habitat revealing a layer of life—from the real to an imaginary world.

The three installations in the polder (Figures 82-83-84)—*Between the Clouds*, *On the Earth*, *Under Our Feet*—were displayed as elemental shapes of triangle, square, and circle, featuring animals organized by habitat: air, land, and underground (Figure 85). Children explored the site with hand-illustrated booklets (Figures 87-88), which served as both a field guide and a storybook (Figures 89-90). With bingo cards and clues, they searched for animal figures painted in white, yellow, and blue—representing past, present, and future.

Each discovery became a learning moment, connecting biodiversity, imagination, and climate awareness. The accompanying booklet, *Where Are the Animals?*, collected these stories along with data, drawings, and blank pages for children's reflections, turning knowledge into a tactile memory.

Among the installations, *Under Our Feet* offered a quiet invitation to reflect on the unseen. Here, children learned that soil is not empty but teeming with invisible life—bacteria, fungi, protozoa, nematodes, and earthworms—all working together in a delicate choreography that sustains carbon cycles and plant growth. The experience transformed the soil from a background to a protagonist, reminding us that life's most vital systems often thrive beneath our notice.

In *The Dream*—set within the forest's green hush—children's imaginary creatures came to life (Figures 110-111). Inspired by Henri Rousseau's eponymous painting (Figures 26-27), this surreal landscape featured hybrid beings imagined in earlier workshops: legged fish to cross droughts, rabbits that transformed into butterflies to escape the heat, and cows that store carbon to purify the air. These figures turned the woodland path into a living story of adaptation and hope, where fantasy and nature blend into a lush, imagined ecosystem. The workshop ended with a collective dance (Figures 114-115) to the rhythm of *In the Jungle*, as children mimicked animal movements and invented new ones (Figures 116-117). Through this shared performance, play became a language of connection—linking art, ecology, and community in motion (Figures 118-119). 'Play' literally turned into a 'dance' in the landscape, reflecting the word's original meaning.

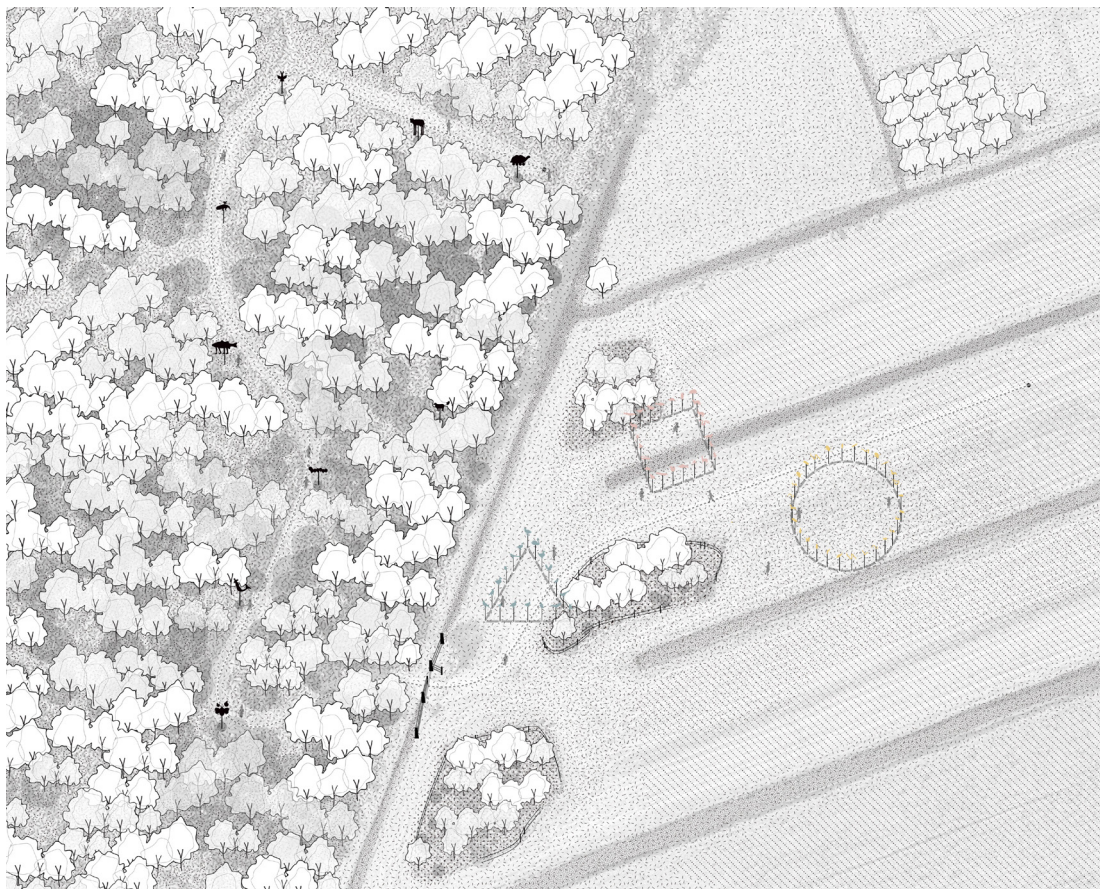


Figure 82 | The plan for the on-site installation.
Image by Jiaming Huang, 2024.

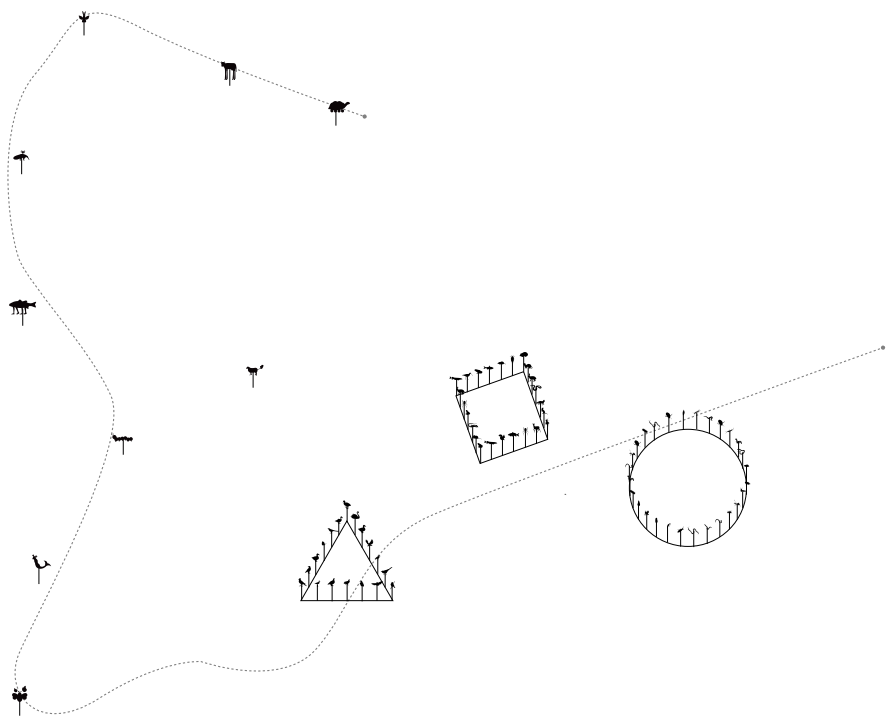


Figure 83 | A diagram showing the installation route and its shapes. Image by Jiaming Huang, Laura Cipriani, 2024.



Figure 84 | Aerial view of the installation and its site. Image by Jiaming Huang, 2024.



Figure 85 | Animal sign.
Photograph by Xuejing He, 2024.



Figure 86 | Preparing the installation on-site.
Photograph by Xuejing He, 2024.



Figure 87 | Children are playing and exploring the game. Photograph by Xuejing He, 2024.



Figure 88 | Children are playing and exploring the game. Photograph by Xuejing He, 2024.

Atlas of Animals

Whispering Wilderness



Whispering
Wilderness

What
are
the
Animals?

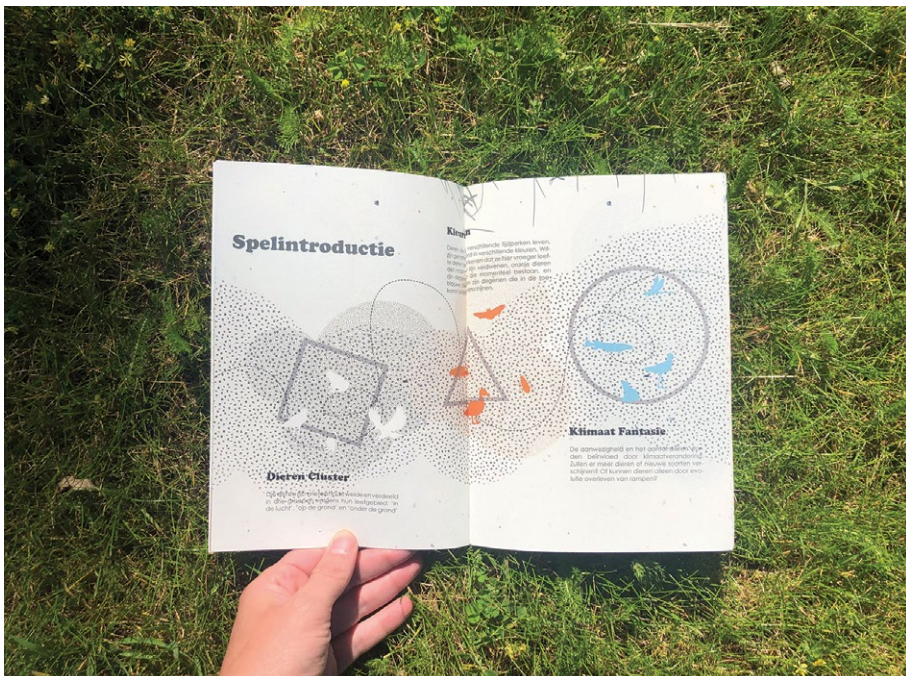


Figure 89 | Above | Instructions for the installation game. Photograph by Laura Cipriani, 2024.

Figure 90 | Left | The bingo card for the installation game. Photograph by Laura Cipriani, 2024.

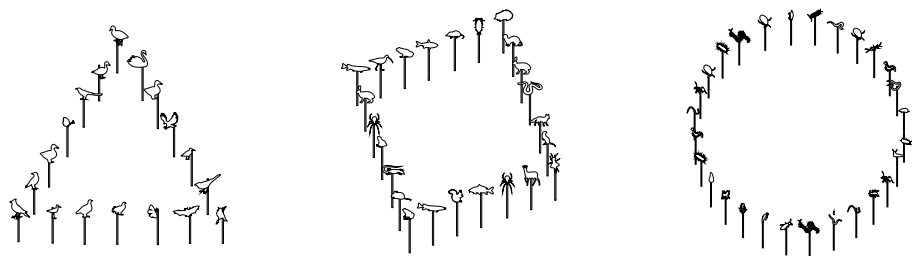


Figure 91 | Animal clusters shape the three installations, organized into three habitat groups: animals of the air, land, and underground.
Image by Jiaming Huang, 2024.

The Design

The installation itself was composed of two interrelated worlds: the real and the imagined. The animals—crafted from lightweight wood—stood on slender poles about the height of a twelve-year-old child, blurring the line between viewer and sculpture. In the meadow, animals were organized by time and habitat: white for the past, yellow for the present, and blue for the future (Figures 91-102-103-104-105-106-107-108-109). The triangular installation symbolized air (Figures 92-93-94), the square installation depicted land (Figures 95-96-97), and the circular installation represented underground life (Figures 98-99-100). As one walked along the path in the forest, *The Dream* extended this narrative. Unpainted wooden poles marked the presence of mythical creatures born from the children's collective imagination. Visitors were invited to bring these beings to life through their own interpretations, completing the act of (co)creation (Figures 112-113). The design as a whole embodied the principle that environmental education is most effective when it moves beyond explanation and into participation—when knowledge is felt, touched, and made together.



Figure 92 | The *In the Air* installation is a triangle. Photograph by Laura Cipriani, 2024.



Figure 93 | Preparing the installation on-site.
Photograph by Xuejing He, 2024.



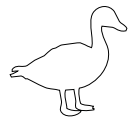
Skylark
Alauda arvensis



Redshank
Tringa totanus



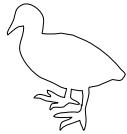
Partridge
Rollulus touloul



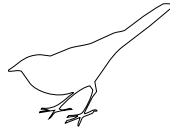
Barnacle Goose
Branta leucopsis



Blackbird
Turdus merula



Eurasian Coot
Fulica atra



White Wagtail
Motacilla alba



Purple Hairstreak
Favonius quercus



Bat
Pipistrellus pipistrellus



Wood Sandpiper
Tringa glareola

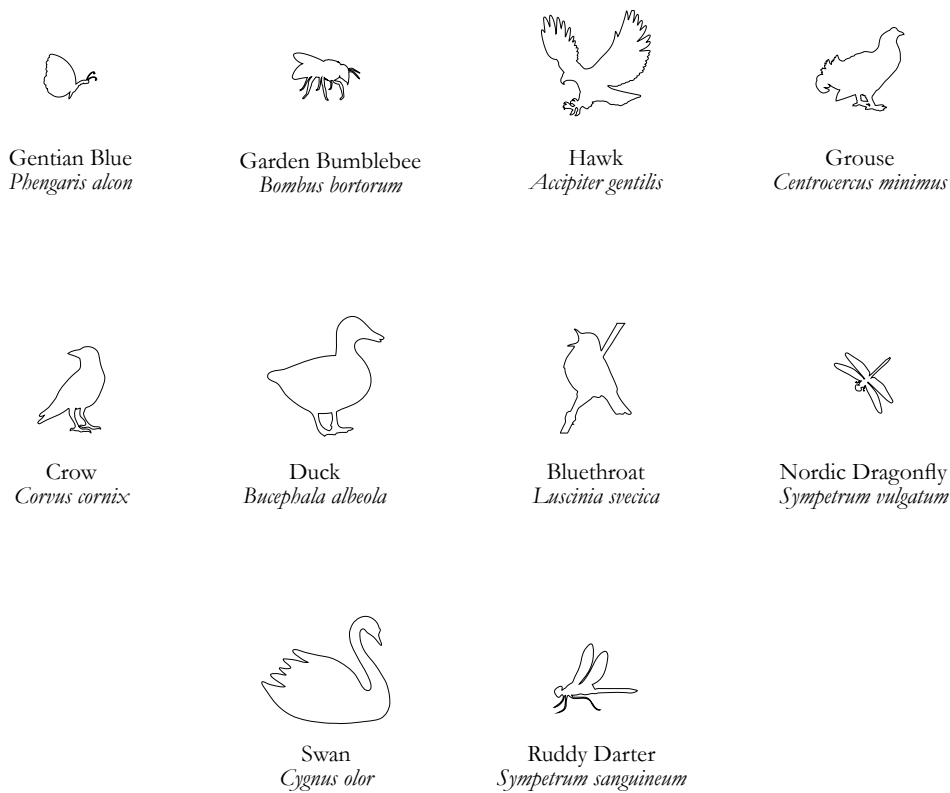


Figure 94 | The animals displayed in the *In the Air* installation. Image by course students, 2024.



Figure 95 | *On the Earth* installation.
Photograph by Laura Cipriani, 2024.



Figure 96 | Preparing the installation on-site.
Photograph by Xuejing He, 2024.



Shrew
Sorex minutus



Pike
Esox lucius



Rudd
Scardinius erythrophthalmus



Red Squirrel
Sciurus vulgaris

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Toad
Bufo bufo



Viviparous Lizard
Zootoca vivipara



Curlew
Alauda arvensis



Carp
Cyprinus carpio



Woodlouse
Ligia oceanica



Waterspider
Habenaria repens



Hedgehog
Erinaceus europaeus

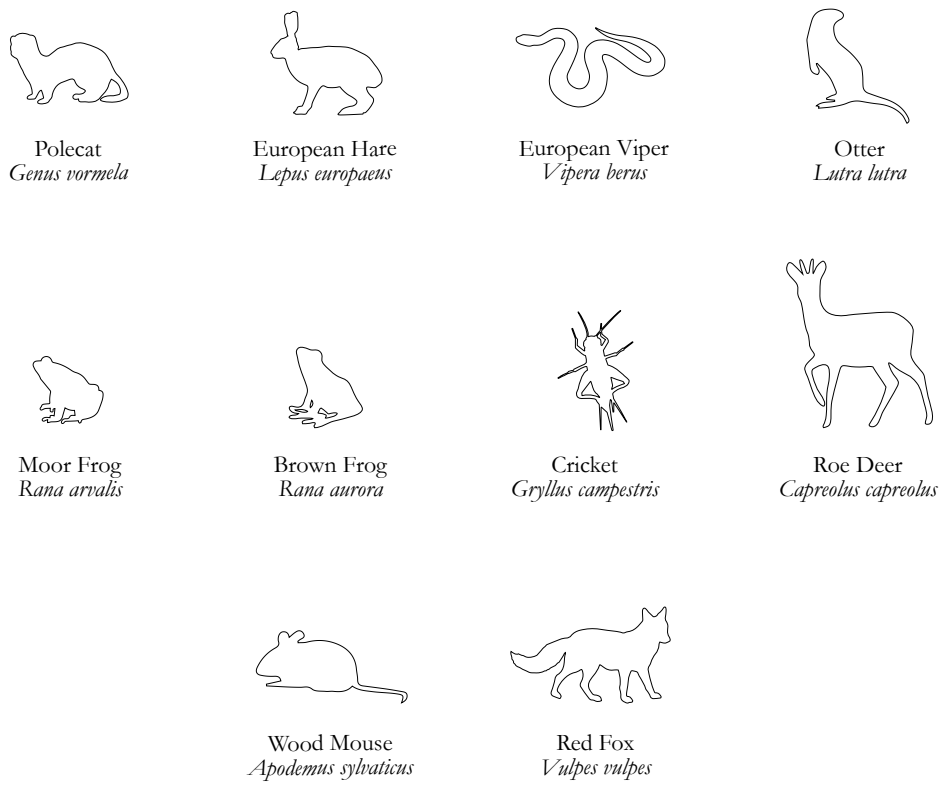


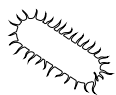
Figure 97 | The list of animals in the *On the Earth* installation. Image by course students, 2024.



Figure 98 | The *Under Our Feet* installation.
Photograph by Laura Cipriani, 2024.



Figure 99 | Preparing the installation on-site.
Photograph by Xuejing He, 2024.



Pathogenic Bacteria
Neisseria gonorrhoeae



Protozoa
Blepharisma japonicum



Actinobacteria
Actinomyces israelii



Centipede
Theraponoda clunifera



Beetle
Graphoderus bilineatus



Flatworm
Endiplozoon nipponicum



Campodea
Campodea staphylinus



Potworm
Enchytraeus buchholzi



Sow Bug
Schizidium tiberianum

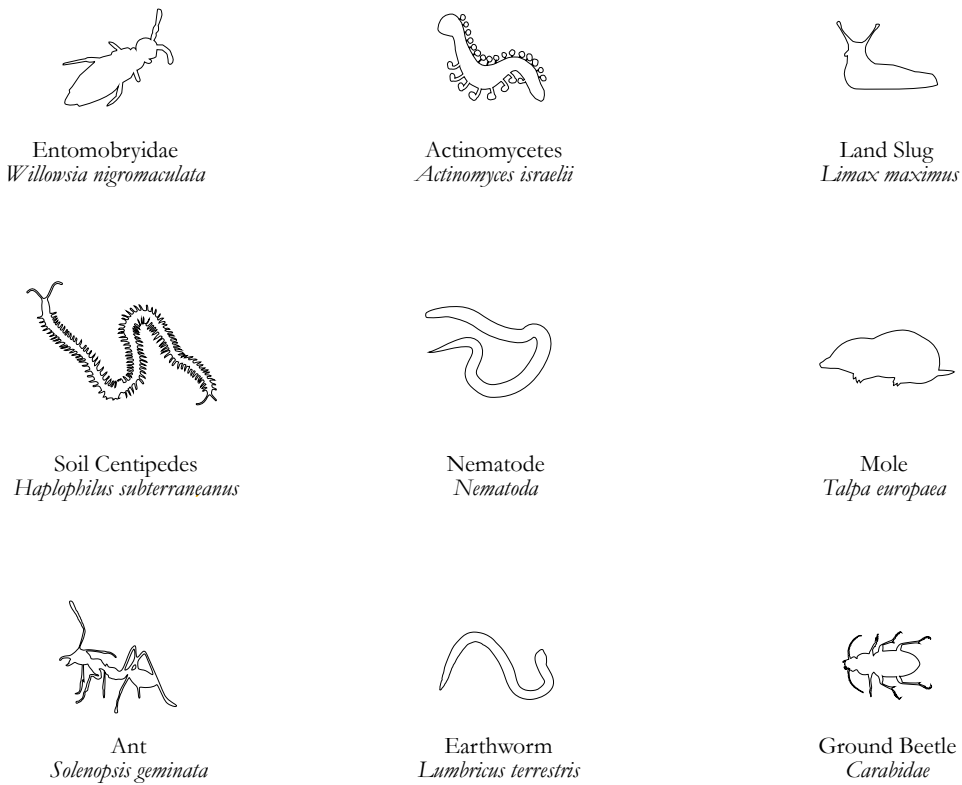


Figure 100 | The list of animals in the *Under Our Feet* installation. Image by course students, 2024.



Figure 101 | Diagram showing the underground ecosystem and how small creatures are connected. Image by Jaming Huang, 2024.

The (In)Visible World

Beneath the meadow and forest lies another realm: the invisible world of the soil (Figure 101). Here, countless organisms form intricate systems of exchange that support life above ground. Soil is, in fact, the most species-rich habitat on Earth, home to nearly two-thirds of all known species. This vast underground biodiversity plays a crucial role in nutrient cycling, carbon storage, and water filtration—processes essential for maintaining climate stability and promoting ecosystem health. By revealing this unseen dimension, the project encouraged children and adults alike to rethink their relationship with the ground they walk on. Learning, in this sense, became an act of attunement—an invitation to listen to what often goes unnoticed and to recognize that the life beneath our feet is both fragile and vital to our shared future.



Figure 102 | The elementary school teacher playing and exploring the game.
Photograph by Laura Cipriani, 2024.



Figure 103 | Children playing and exploring the game. Photograph by Xuejing He, 2024.



Figure 104 | Children play and explore the game with university students acting as teachers.
Photograph by Xuejing He, 2024.



Figure 105 | Students guiding and helping children. Photograph by Xuejing He, 2024.



Figure 106 | Looking for signs of different animals. Photograph by Xuejing He, 2024.



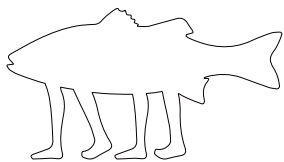
Figure 107 | Children playing the bingo card game. Photograph by Xuejing He, 2024.



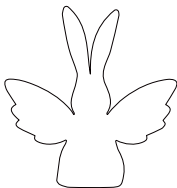
Figure 108 | Children and cows playing in the polder. Photograph by Xuejing He, 2024.



Figure 109 | The cow is curious about the game: *'Is it edible?'* Photograph by Xuejing He, 2024.



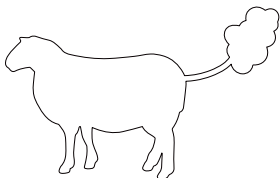
Walkable Fish



Flying Bunny



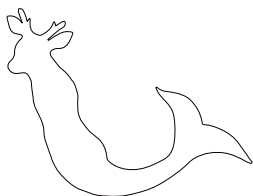
Cow with Long Legs



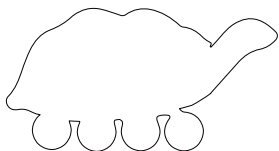
Sheep with Flooting Tail



Spying Anteater



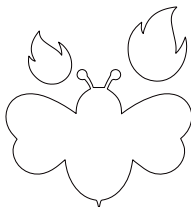
Swimming Deer



Flash Turtle



Fast Worm



Flame Butterfly

Figure 110 | Some imaginary animals were (co)created with children during the second indoor workshop at school to adapt to climate change. These drawings and ideas became part of *The Dream* installation in the woods.
Image by course students, 2024.



Figure 111 | The walkable fish.
Photograph by Xuejing He, 2024.





Figure 112 | Left | Exploring the dream, its animals, and adding leaves to the installation.
Photograph by Xuejing He, 2024.

Figure 113 | Above | Feeling the landscape and forest around. Photograph by Xuejing He, 2024.



Figure 114 | Final dancing game with all the children. Photograph by Xuejing He, 2024.

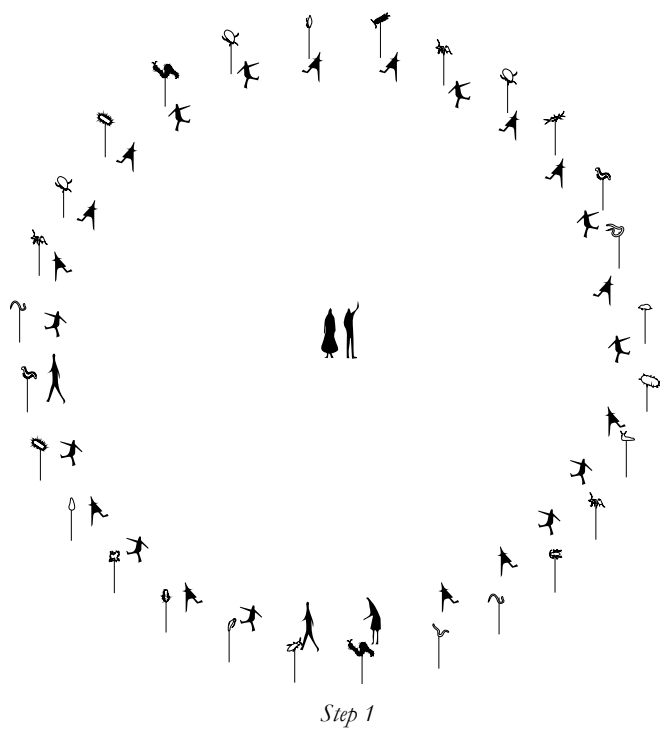
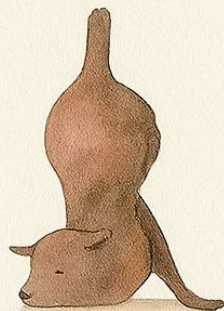
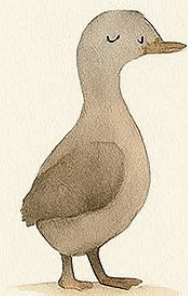
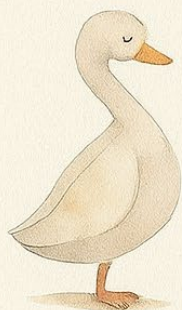


Figure 115 | Preparing for the final dancing game with all the children.
Image by Laura Cipriani, 2024.

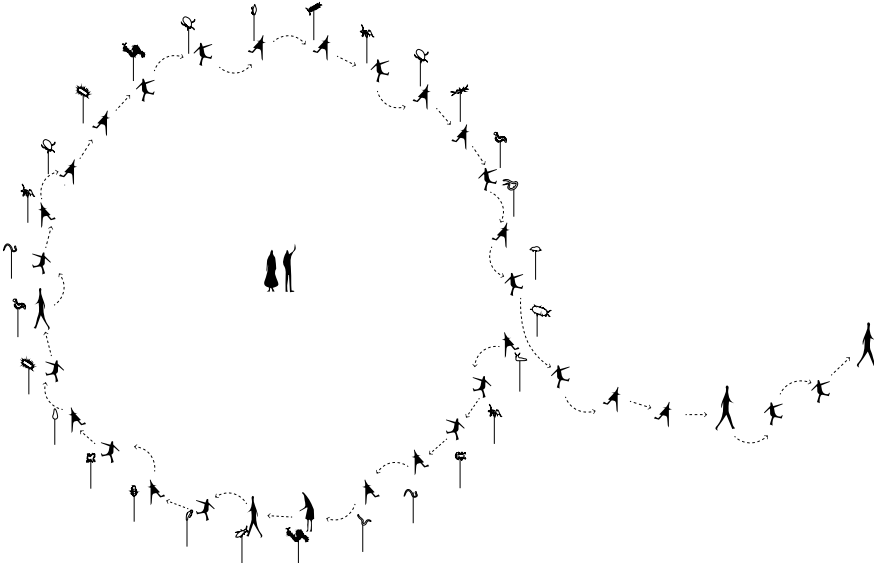




In the Jungle | The Lion Sleeps Tonight

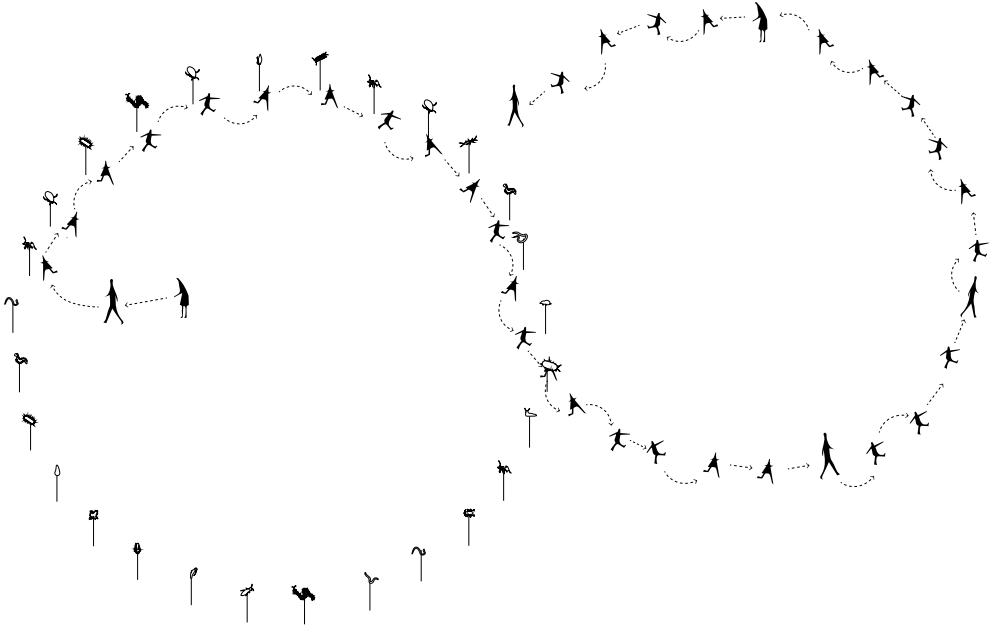
Figure 116 | Left | During the dancing game, children and adults mimicked the animals' movements to the tunes of the *In the Jungle* song. Image by ChatGPT, edited by Laura Cipriani, 2024.

Figure 117 | Above | The sheet music for the song *In the Jungle*. Image by ChatGPT, edited by Laura Cipriani, 2024.



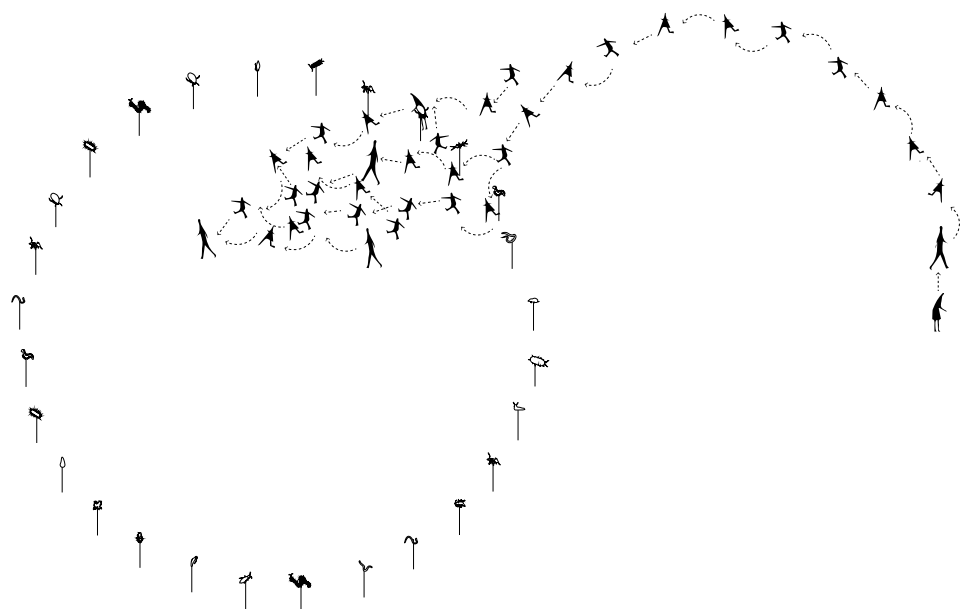
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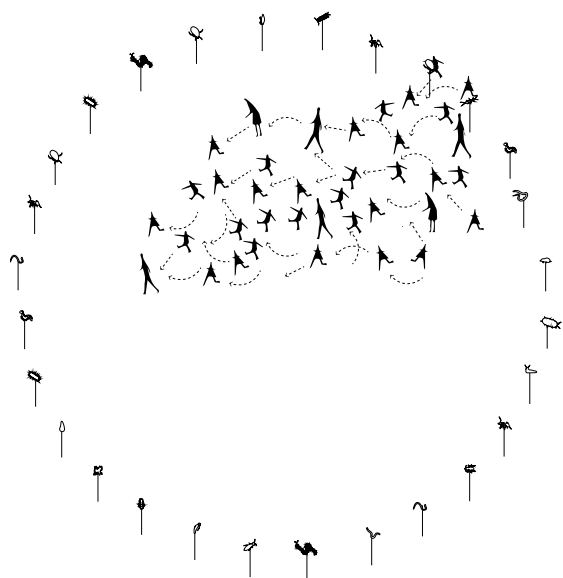
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Figure 118 | Wild choreography dynamics set to
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Images by Laura Cipriani, 2024.

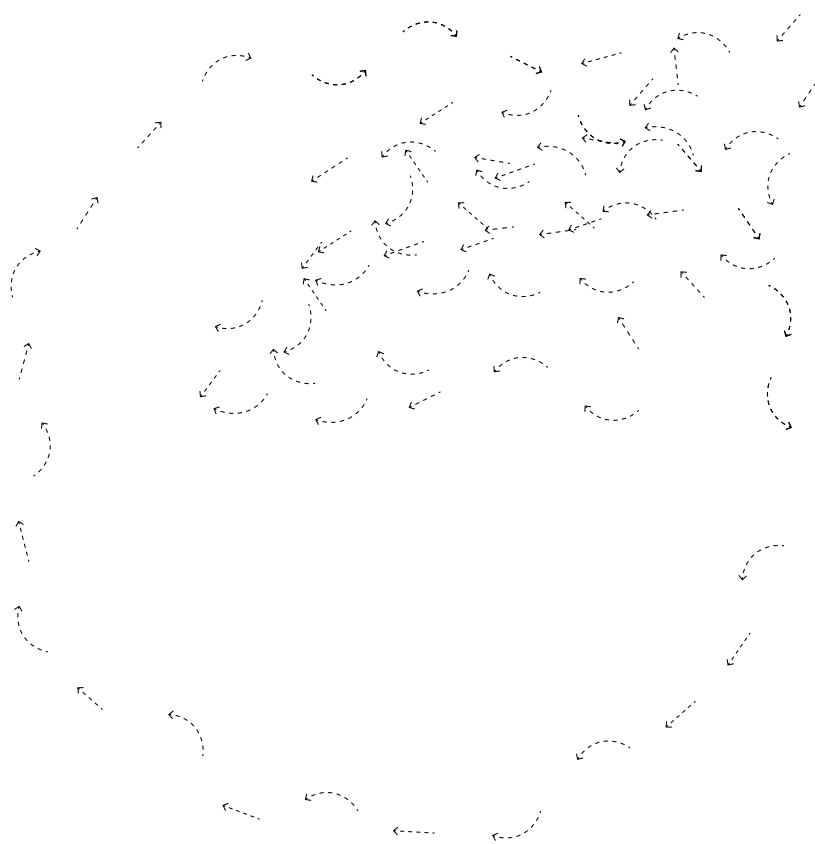


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Step 5



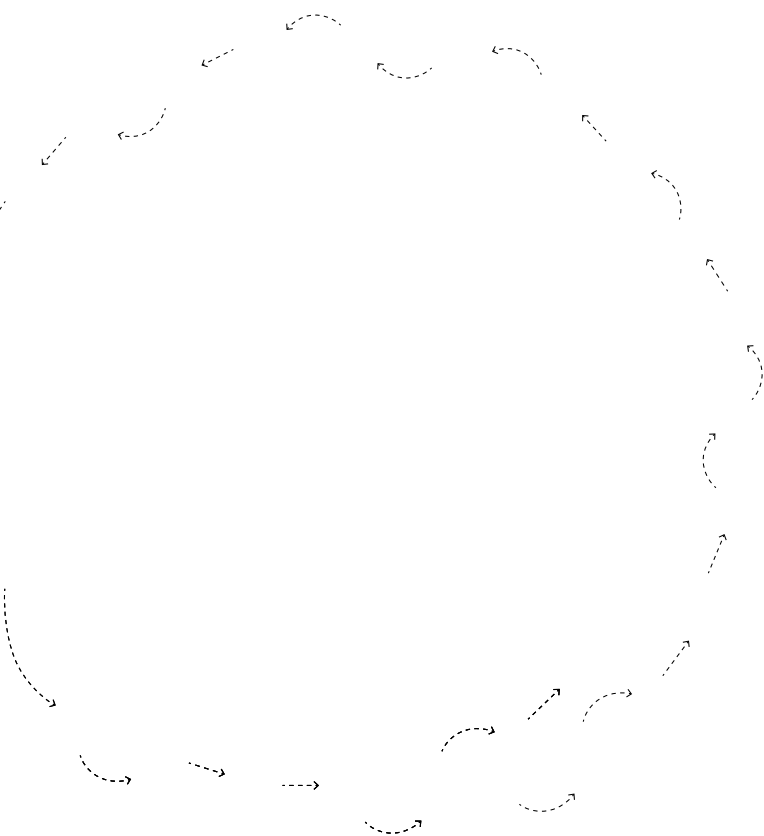
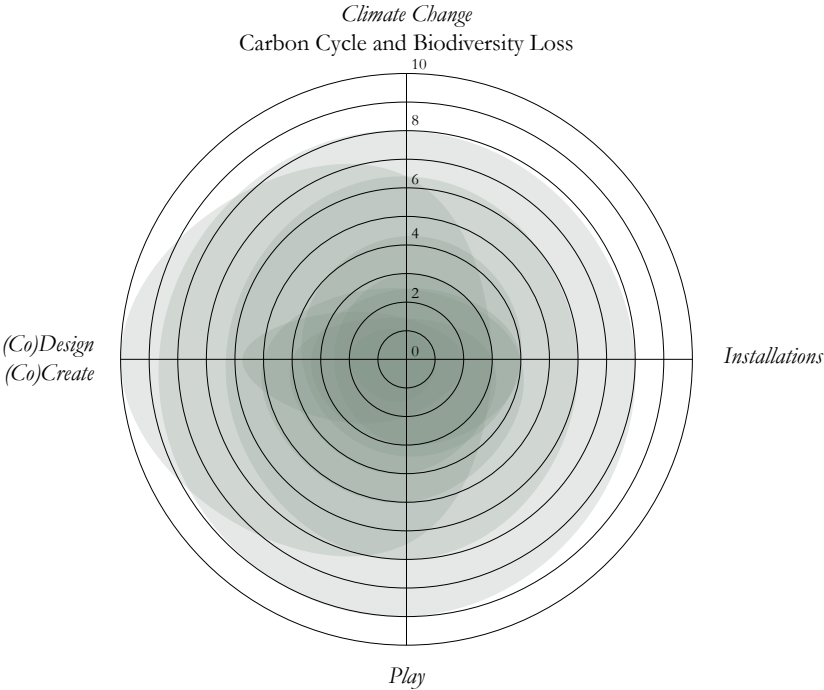


Figure 119 | Drawing the movements of the wild choreographies. Image by Laura Cipriani, 2024.



Children Knowledge | *After experiencing the installation*

Figure 120 | Results from the second set of questions about climate change, installation, play, (co)design, and (co)creation after experiencing the installation game. Image by Sari Naito, Laura Cipriani, 2024.

4.2 | The Art of Learning

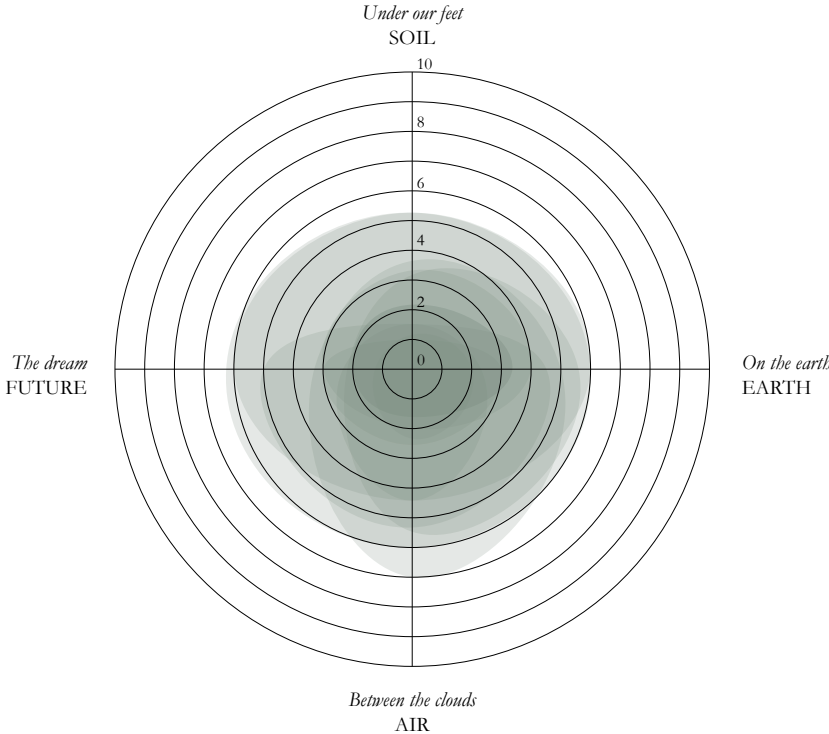
Between Emotions and Knowledge

Laura Cipriani

Learning Through Play

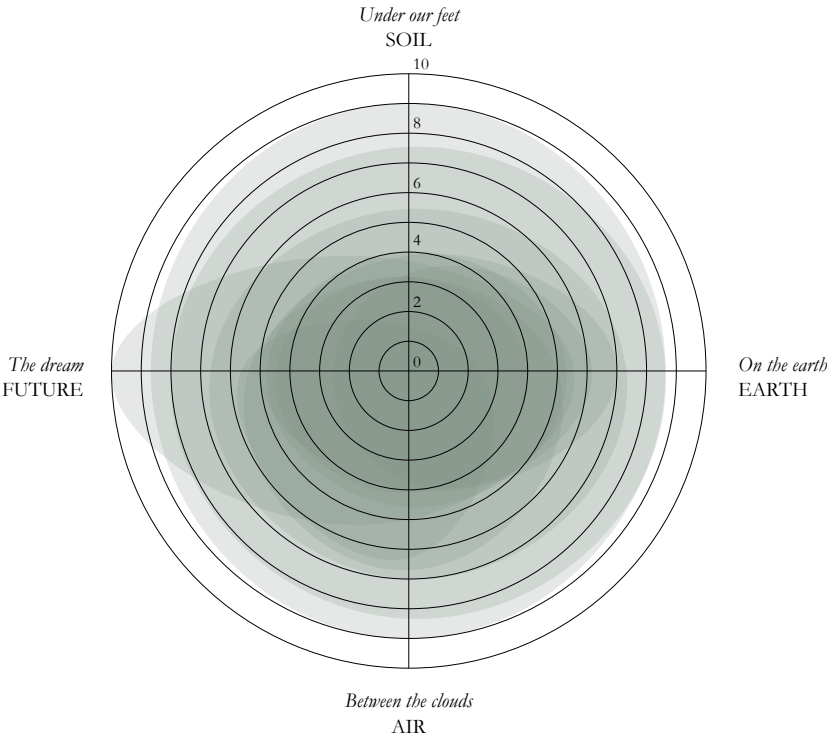
Throughout the event, learning happened as a dialogue between action and reflection. Children interacted with the installations as both participants and observers, testing, questioning, and changing the designs. Simple questionnaires, given before and after the workshop, offered helpful insights into how their perceptions changed. The results showed measurable growth in understanding the carbon cycle (Figures 121-122), biodiversity, and the interdependence of animals, soil, and climate.

Questions were arranged around the four installations—*Between the Clouds*, *On the Earth*, *Under Our Feet*, and *The Dream*—each created to increase awareness of how living systems connect across different parts of the environment. A second set of questions examined how the children experienced play, (co)design, and (co)creation as means of learning (Figure 120). The findings highlighted how creative, embodied activities—such as drawing, building, playing, and performing—can transform abstract scientific concepts into a lived experience. Children’s understanding of the soil carbon cycle, biodiversity, and climate issues improved, but just as important was the development of empathy and curiosity about the natural world.



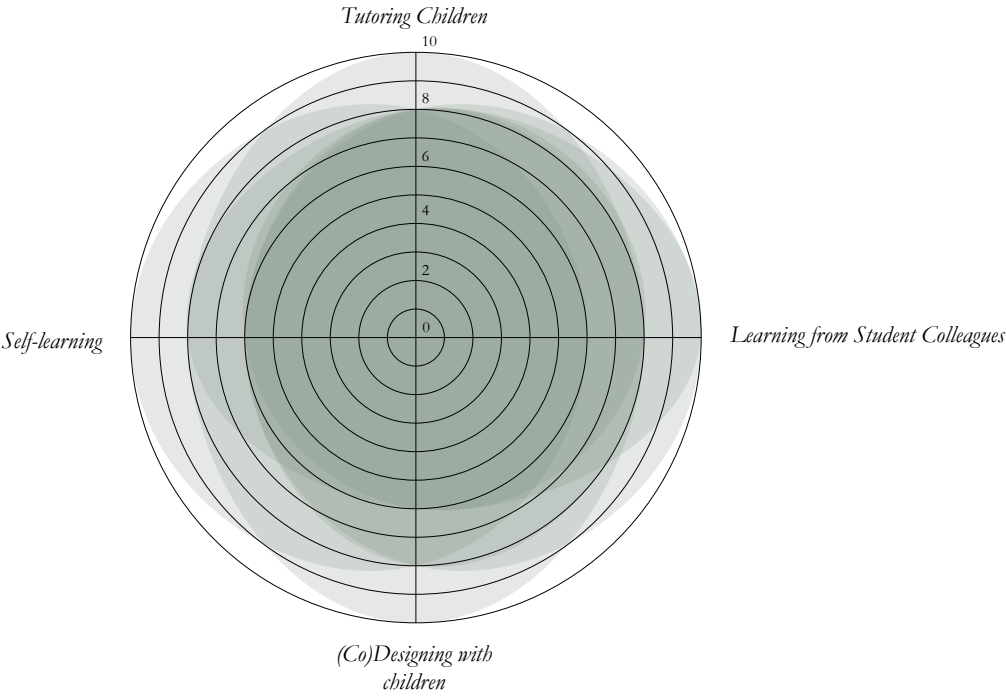
CARBON CYCLE KNOWLEDGE | Before experiencing the installation

Figure 121 | Results from the first set of questions about carbon cycle knowledge before children experienced the installations. Image by Sari Naito, Laura Cipriani, 2024.



CARBON CYCLE KNOWLEDGE | *After experiencing the installation*

Figure 122 | Results from the first set of questions about carbon cycle knowledge after children experienced the installations. Image by Sari Naito, Laura Cipriani, 2024.



University Students' Knowledge | *After completing the course*

Figure 123 | Results from the questionnaire on university students' experiences with self-learning, tutoring children, learning from student peers across disciplines, and (co)designing methods with children. Image by Sari Naito, Laura Cipriani, 2024.

Learning from Teaching

University students also reflected on their learning through post-course questionnaires and focus group discussions (Figure 123). Many described the project as transformative—an opportunity to connect theory with practice and rediscover design as an educational and relational act. They reported increased confidence in explaining complex environmental ideas to non-expert audiences, especially children, and developed new methods for participatory, emotionally resonant design. By the end of the course, students had not only expanded their technical and ecological knowledge but also cultivated an ethic of care and creativity. They came to understand that addressing climate change through design requires not just innovation but imagination—a willingness to see learning as a shared, evolving process.

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In the final gesture of *(Co)Creating the Landscape*, knowledge, play, and care converged. The installations stood as both artworks and pedagogical tools—reminders that landscapes, like learning, are never fixed but always in a state of becoming. Through collective imagination and making, participants discovered that the act of shaping the world together is itself a lesson in hope.



Figure 124 | A student speaking with a participant at the final event. Photograph by Xuejing He, 2024.

Conclusions

An Incremental Pedagogy

Laura Cipriani

The course *Climate Change as a Game* was more than just a teaching experiment; it became a shared journey of discovery—an initiative built on *interconnected processes*. It brought together university students from landscape architecture, architecture, and urbanism with a primary school class, fostering dialogue across generations, disciplines, and spheres of experience. What began as an academic exercise transformed into a living laboratory where play, design, and climate awareness united in the open landscape.

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More than just a course, it became a *learning ecosystem*: a space where ideas grew through collaboration, experimentation, and the steady rhythm of participation. The process embodied sustainability not as a distant ideal but as a practice of care—ecological, social, and educational. By merging environmental understanding with creative teaching methods, participants cultivated regenerative attitudes toward landscape-making, biodiversity, and climate resilience. Knowledge emerged not only from instruction but through encounters—between people and soil, water and imagination, teaching and learning as reciprocal acts (Figure 124).

The most transformative aspect of the course was its *incremental pedagogy* (Figure 125). TU Delft

Phase 0
Conference | *The Power of Play*

Phase 1
Exploring and Playing the Landscape

6 Speakers

9 University Students

28 Primary

Landscape Architecture School Students

Architecture

Urban Design

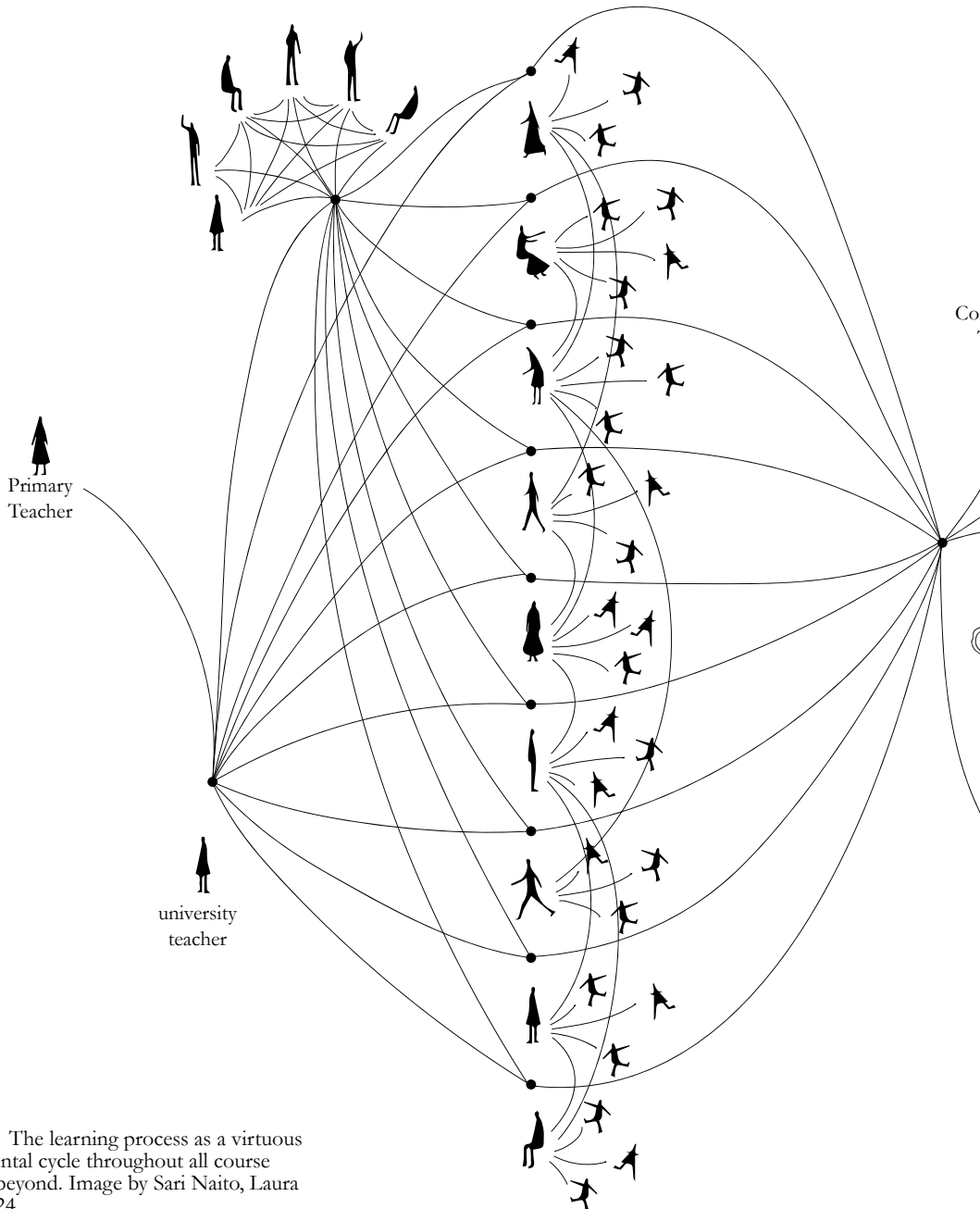
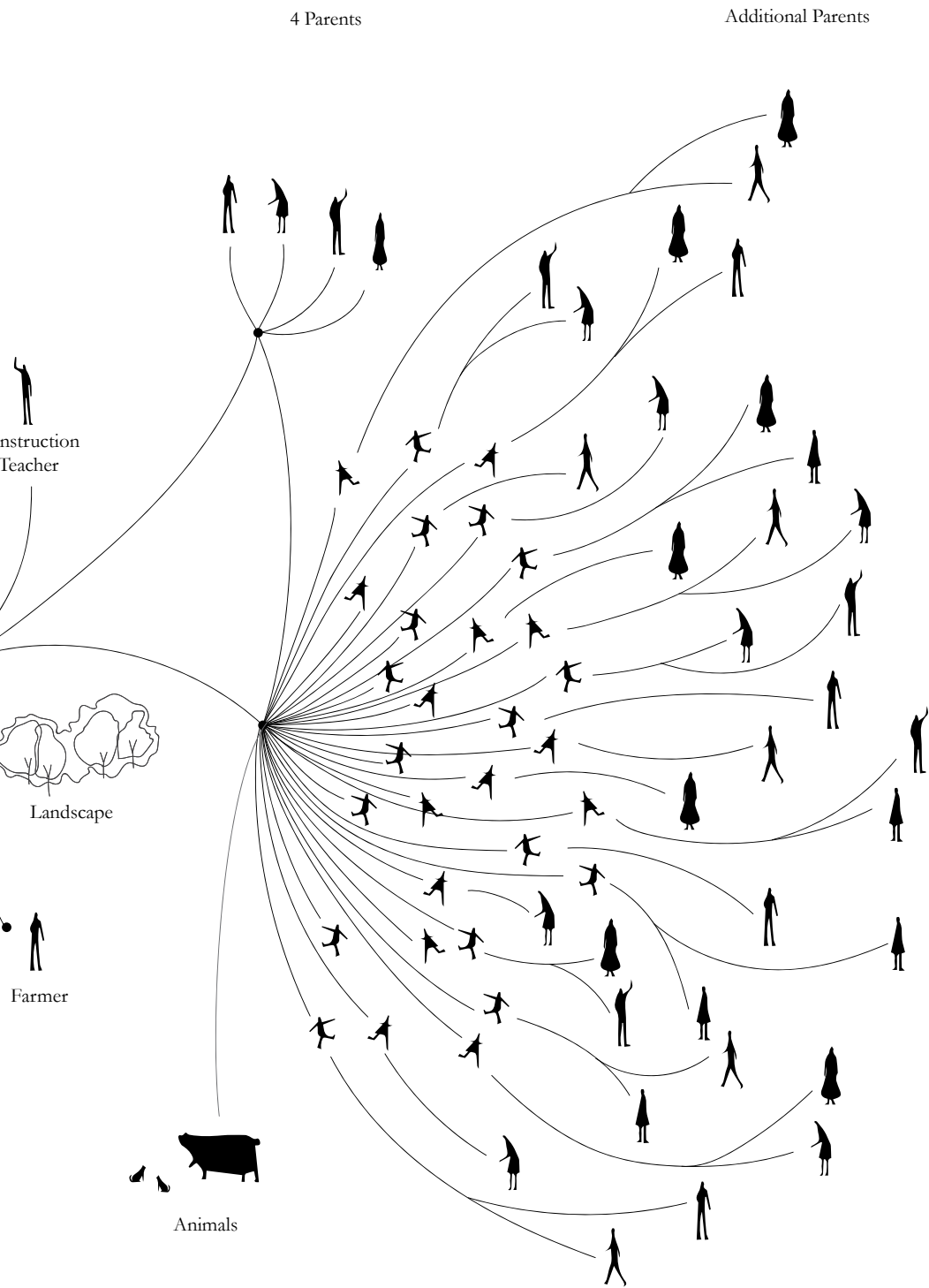


Figure 125 | The learning process as a virtuous and incremental cycle throughout all course phases and beyond. Image by Sari Naito, Laura Cipriani, 2024.

Phase 2
(Co)Designing the Landscape

Phase 3
(Co)Creating the Landscape



students acted as teachers for the children, who then became teachers for their parents, creating a gentle chain of learning that extended beyond the classroom. Through this exchange, children built emotional bonds with the landscape and gained a deeper understanding of climate processes, while university students and teachers improved their ability to communicate complex ideas through play and empathy. The farmer and local community also joined the conversation—trying out new methods for cultivating resilient, biodiverse landscapes on the urban edge. In this way, humans and the often invisible organisms beneath our feet participated together in acts of shared creation and learning. University students, children, teachers, farmers, parents, and (in)visible living organisms—all engaged in a cycle of sharing and exploring knowledge through play. The project concluded with a symbolic gesture that connected these many threads: transforming the temporary installation into a permanent feature within the rural landscape (Figure 126). This final piece took the shape of a *golden spiral*—a living representation of the Fibonacci sequence, its curves echoing patterns found in shells, sunflowers, and galaxies (Figures 127-128). The corten spiral rose from the soil, symbolizing the ascent from underground life to land dwellers and sky-bound creatures (Figure 130), ending in a constellation of imagined beings adapted to the climate of the future. At its center stood the cow with long legs (Figure 129), a creature born from children's imagination and collective hope. Seen from above, the spiral evokes both memory and possibility—a quiet reminder that all learning, like the landscape itself, unfolds in cycles. It

Conclusions

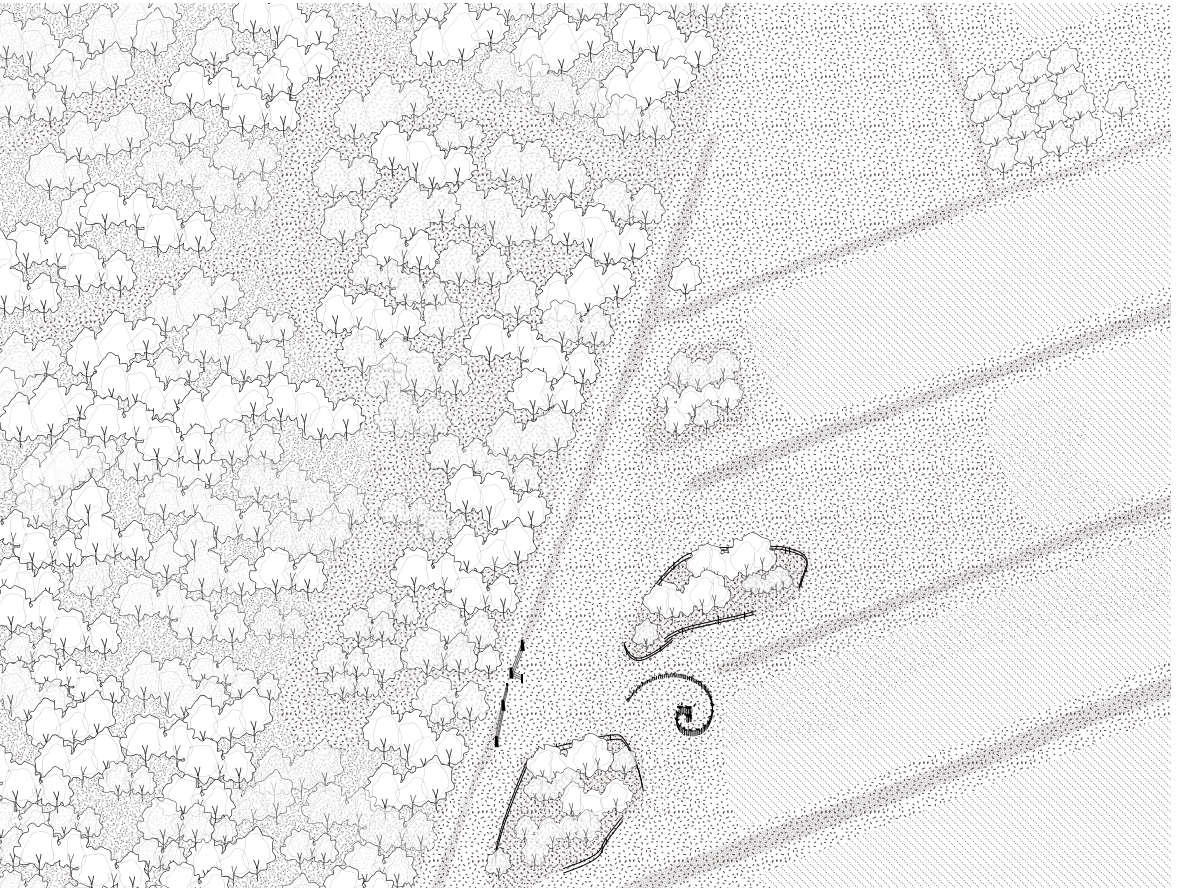


Figure 126 | The permanent installation entitled *Golden Spiral of Evolution* is located in Stiltegoed in Delftse Hout. Image by Sari Naito, 2025.
Project by Laura Cipriani, 2025.

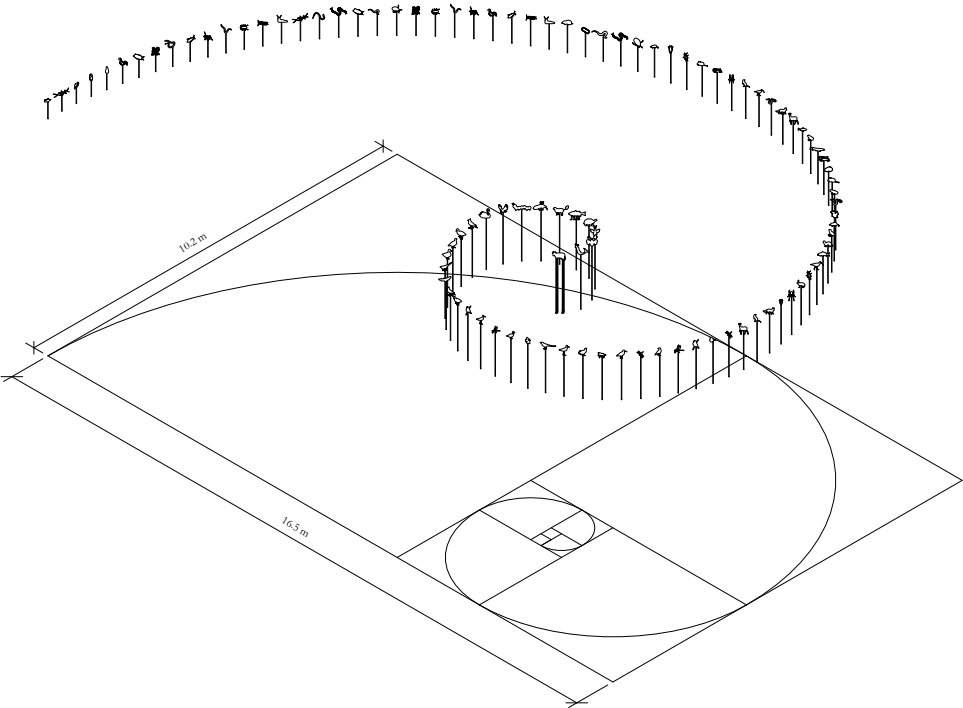


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Figure 128 | *The Golden Spiral of Evolution*
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climate. Photograph by Fabiana Toni, 2025.





Figure 129 | The cow with long legs.
A detail of *Golden Spiral of Evolution* project.
Photograph by Fabiana Tóni, 2025.



Figure 130 | A detail of *Golden Spiral of Evolution* project. Photograph by Fabiana Toni, 2025.

symbolizes the connection between nature and culture, play and design, thought and touch. Within its golden curve lies the essence of the project: that education, rooted in curiosity and collaboration, is not an endpoint but an ever-expanding movement of connection between humans and the living world.



Figure 131 | The students and the docent of the playful course. Photograph by Jiaming Huang, 2024.

The Playful Team

A Project of Processes

TU Delft | Faculty of Architecture

Docent | Laura Cipriani

Students | Janaina Conde | Xuejing He | Jiaming Huang
| Sara van Keulen | Olivia Lensen | Fenne Manshande |
Melissa Meertens | Miranda Schmittgens | Qianlin Xu |
Yuhang Zhai

with

Cartographic data | Michiel Pouderoijen

Conference photographer | Marcel Bilow

Conference videos | Sigwela Augustin | Meike Haan

Critique docent | Marcel Bilow

Model printing | Bob de Boer | Nicolle Cobben | Bas Vahl

Student assistants | Jiaming Huang | Sari Naito

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In collaboration with

Primary school | Groen van Prinstererschool | Voorburg |
NL

Primary school docent | Florianne van Zandvoort

Children class | Group 8a Students

Kindly hosted by

Stiltegoed Installation Site | Josje Duyndam



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Being a university student in landscape architecture and becoming a teacher for children in this course was an exceptional learning experience. You feel responsible and empowered, which motivates you to study and prepare even more for your young scholars.

Jiaming Huang
TU Delft student



Figure 132 | Jiaming Huang is explaining the game to children. Photograph by Xuejing He, 2024.



Figure 133 | A journalist interviews Laura Cipriani about the project. Photograph by Xuejing He, 2024.

“

Everything shifts when the course envisions your students becoming teachers for others, such as children. The students become actors and agents of change, and the teacher assumes the role of the play's director. My job was to set the conditions for each scene and rehearse the steps for collaboration, but when the curtains rise, there is nothing left to do but let the Dance-Play unfold. You step back and wonder how pedagogy can evolve.

Laura Cipriani
TU Delft docent

“

The game is fun but challenging because it only provides hints about the animals.

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Children

Groen van Printeren School



Figure 134 | TU Delft TV interviewing children
about the installation game.
Photograph by Xuejing He, 2024.



“

I am a cow and usually graze actively at the Stiltegoed Polder site. I was very interested in the installation, but unfortunately, it wasn't edible!

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The Cow
Stiltegoed Polder site

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Figure 127 | The *Golden Spiral of Evolution* project and proportional ratios. Image by Sari Naito, 2025. Project by Laura Cipriani, 2025.

Figure 128 | The *Golden Spiral of Evolution* featuring the animals' evolution in a changing climate. Photograph by Fabiana Toni, 2025.

Figure 129 | The cow with long legs. A detail of *Golden Spiral of Evolution* project. Photograph by Fabiana Toni, 2025.

Figure 130 | A detail of *Golden Spiral of Evolution* project. Photograph by Fabiana Toni, 2025.

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Figure 132 | Jiaming Huang is explaining the game to children. Photograph by Xuejing He, 2024.

Figure 133 | A journalist interviews Laura Cipriani about the project. Photograph by Xuejing He, 2024.

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Figure 135 | The cow was interested in participating in the game. Photograph by Xuejing He, 2024.

Today's younger generations face a changing world as climate change alters landscapes and cities. How might we help them listen to these transformations? How can we encourage children and university students to imagine, design, and care for landscapes affected by climate change?

And, perhaps most urgently, how do we rethink education itself—creating pedagogies and collaborations that connect primary and higher education through play, creativity, and action?

This book is the result of the Comenius Fellowship for didactical and pedagogical innovation—it became a collective learning experiment to act together for the planet. It aims to promote not only ecological and landscape literacy but also emotional and artistic bonds with nature, fostering hopeful engagement in the climate transition to explore, (co)design, and (co)create a new landscape together.

Through the lens of play, the project opens up exploratory paths for learning. Play becomes a teaching method, a designed experience where doing and dreaming blend—where knowledge is gained through movement, storytelling, and creativity. By embracing new roles and perspectives, students and children explore different worlds, beings, and possibilities; and in doing so, they begin to see their own world in a new light. The eyes of the cows or those of the worms shape a different cosmos.

Play, in this context, is not escape but a return—a return to curiosity, joy, and the vital pulse of coexistence. It is where learning becomes an act of hope, and where design, landscape, and imagination come together in a shared promise: that the future, like Earth itself, can still be shaped with care.



9789465183992

© 2026 TU Delft OPEN Publishing

ISBN: 978-94-6518-399-2

DOI: <https://doi.org/10.59490/mt.266>

TU Delft OPEN Publishing