

Facilitator's Implementation Handbook

Annual Calendar, Checklists, and Spatial Design Guide

February 2026 | Version 1.2 | CC BY-SA 4.0

Erdpuls Facilitator's Implementation Handbook

A Practical Guide to Running the Full Workshop Program

Erdpuls Müllrose — Living Laboratory & Makerspace Garden

Version: 1.2

Date: February 2026

Changelog

Version	Date	Changes
1.2	February 2026	BNE compliance update: BNE Criteria Coverage table added; Facilitator Qualification Profile section added (Areas 6.1.1/6.1.2); Continuing Education Requirements section added (Areas 6.2.1/6.2.2 — minimum requirements); Universal Checklist expanded with participant pre-workshop information (3.3.1) and post-workshop follow-up items (3.3.3); Partner Network and BNE Cooperation section added (Area 5.3.1 — minimum requirement); Quality Report minimum content standards added (Areas 5.2.1/5.2.2)
1.1	February 2026	Institution name updated; license footer added; version updated for OER publication
1.0	October 2025	Initial release

BNE Criteria Coverage Reference

This handbook is an operational and organisational document. It addresses primarily the **Organisationsqualität** sections of the Brandenburg BNE Quality Catalog (Qualitätskatalog für BNE außerschulischer Anbieterinnen und Anbieter, MLUK Brandenburg, April 2023). The table below maps catalog criteria to the sections of this handbook where they are addressed. For the full criterion-by-criterion evaluation with evidence statements, see the *BNE-Bewertung und Leitbild*.

BNE Area	Criteria	Where Addressed in This Handbook
3.3 — Methods: Supporting	3.3.1 pre-workshop participant preparation; 3.3.3 post-workshop follow-up resources	Universal Checklist (2 Weeks Before — participant items; After the Workshop — follow-up items)
5.2 — Quality Development: Evaluation	5.2.1 continuous practice reflection; 5.2.2 systematic self-evaluation	Universal Checklist (After the Workshop); Quality Report Minimum Content Standards
5.3 — Quality Development: Cooperation	5.3.1 active BNE networking (minimum requirement)	Partner Network and BNE Cooperation
6.1 — Facilitator Qualification	6.1.1 formal qualification / 6.1.2 personal qualification (minimum: one of these)	Facilitator Qualification Profile
6.2 — Continuing Education	6.2.1 preparatory continuing education (minimum requirement); 6.2.2 ongoing min. 24h/year (minimum requirement)	Continuing Education Requirements

Minimum requirements satisfied: All minimum requirements in Areas 3, 5, 6, and 7 as they apply to this operational document.

How to Use This Handbook

This handbook is for the person who will actually run the workshops. You have read (or have access to) the Pattern Discovery Toolkit, the four appendices, the twenty living experience guides, and the proxemic integration supplement. Those documents describe *what* to do and *why*. This handbook tells you *how*, *when*, *where*, and *in what order*.

It is organized as a year — your first year of full programming. By the end of this year, every target group will have been served, all four appendices will have been activated, the pattern language will have its first entries, and the quality framework will have its first evaluation data.

PART ONE: The Annual Programming Calendar

The Erdpuls Seasonal Rhythm

The campus operates on a four-season cycle that shapes which workshops are possible, which are optimal, and which require adaptation:

Season	Campus Rhythm	Dominant Theme
Frühling (March–May)	Pflanzen und Planen	New growth, first observations, outdoor work begins
Sommer (June–August)	Wachsen und Sammeln	Full biodiversity, residency period, outdoor workshops peak
Herbst (September–November)	Verarbeiten und Bewahren	Harvest, processing, cross-border exchange, elder knowledge
Winter (December–February)	Reparieren und Reflektieren	Indoor focus, repair, reflection, data synthesis, planning

The Year at a Glance

The calendar below distributes all 20 workshop guides across the year, one implementation per guide. In subsequent years, workshops repeat with new participant cohorts — producing the longitudinal data accumulation that the toolkit depends on.

SPRING (March–May)

Week	Workshop	Target Group	Appendix	Duration	Key Materials
Mar W2	Facilitator preparation: read guides, scout transect routes, prepare GIS project, stock Boden-Koffer	—	—	5 days	All documents
Mar W3	Boden-Begegnung (Soil Encounter)	Adults/ Families	A.2	Half day	Boden-Koffer, field sheets

Week	Workshop	Target Group	Appendix	Duration	Key Materials
Apr W1	Erdreich-Entdecker (Soil Explorers)	Children/ Youth	A.1	3–4 hrs	Boden-Koffer, Feldbogen sheets, magnifiers
Apr W3	Sehen, was wir schon tauschen (Exchange Mapping)	Adults/ Families	B.2	2.5–3 hrs	A3 worksheets, colored markers, repair tools
May W1	Das Garten-Wirtschaftsspiel (Garden Economy Game)	Children/ Youth	B.1	3–3.5 hrs	Token cards (4 colors), game materials
May W3	Die Karte unter der Karte (Map Beneath the Map)	Adults/ Families	C.2	Full day	Printed maps (A1), GIS laptop, transect gear

SUMMER (June–August)

Week	Workshop	Target Group	Appendix	Duration	Key Materials
Jun W1	Artist/Researcher residency begins	Artists/ Researchers	—	2–4 weeks	Apartment, studio, equipment access
Jun W1	Boden-Tiefe (Soil Depth) — initial session	Artists/ Researchers	A.4	2–3 hrs	Field notebook, personal tools
Jun W2	Wert jenseits des Preises (Value Beyond Price)	Artists/ Researchers	B.4	2.5–3 hrs	Reading materials, writing supplies
Jun W3	Kartografien der Zugehörigkeit — first transect	Artists/ Researchers	C.4	Full day	GPS, field notebook, camera, GIS station

Week	Workshop	Target Group	Appendix	Duration	Key Materials
Jul W1	Messen, was zählt (Measuring What Matters)	Artists/ Researchers	D.4	2.5–3 hrs	BNE framework printouts, evaluation design materials
Jul W2	Wo hört unser Ort auf? (Where Does Our Place End?)	Children/ Youth	C.1	Full day	Aerial photos (A3), compasses, Expedition Record Sheets
Aug W1	Habe ich etwas Echtes gelernt? (Quality reflection)	Children/ Youth	D.1	1.5–2 hrs	Quality Star poster, Competency Discovery Cards, Portfolio Sheets
Aug W2	Residency mid-review + end synthesis	Artists/ Researchers	C.4 + D.4	2 + 2 hrs	All residency data, GIS project

AUTUMN (September–November)

Week	Workshop	Target Group	Appendix	Duration	Key Materials
Sep W2	Boden-Brücke (Soil Bridge)	Cross-Border DE/PL	A.5	Full day	Bilingual Feldbogen, transport, Polish partner coordination
Sep W4	Eine Wirtschaft, Zwei Sprachen (One Economy, Two Languages)	Cross-Border DE/PL	B.5	Full day	Bilingual materials, shared meal provisions
Oct W2	Eine Landschaft, Zwei Länder (One Landscape, Two Countries)	Cross-Border DE/PL	C.5	2 days	Cross-border maps (A0), GIS data both countries, transport

Week	Workshop	Target Group	Appendix	Duration	Key Materials
Oct W4	Qualität ohne Grenzen (Quality Without Borders)	Cross-Border DE/PL	D.5	Half day	Framework printouts (DE/PL/EU/UNESCO), Comparison Matrix poster
Nov W1	Boden-Gedächtnis (Soil Memory)	Elders/ Intergenerational	A.3	2.5–3 hrs	Wide bowls, magnifiers, audio recorder, Kuchen
Nov W3	Der Erinnerungsmarkt (Memory Market)	Elders/ Intergenerational	B.3	2–2.5 hrs	Memory Offering/ Seeking cards, Memory Market Ledger

WINTER (December–February)

Week	Workshop	Target Group	Appendix	Duration	Key Materials
Dec W1	Die Landschaft erinnert sich (Landscape Remembers)	Elders/ Intergenerational	C.3	3–3.5 hrs	Historical maps, Memory Map paper (A1), audio recorder
Dec W3	Was ist es wert, weitergegeben zu werden? (Wisdom Circle)	Elders/ Intergenerational	D.3	2–2.5 hrs	Learning Lifetime worksheets, Gestaltungskompetenz cards
Jan W2	Was macht es wert, wiederzukommen? (Quality co-design)	Adults/Families	D.2	2–2.5 hrs	Quality Compass worksheets, flip charts, evidence artifacts

Week	Workshop	Target Group	Appendix	Duration	Key Materials
Jan W4	Annual Data Synthesis	Facilitator + volunteer team	—	2–3 days	All pattern cards, maps, token records, portfolios, GIS data
Feb W2	Year-End Quality Report compilation	Facilitator + Quality Ambassadors	—	2 days	All evaluation data from D.1–D.5
Feb W4	Year 2 planning	Facilitator + core team	—	1 day	Calendar template, budget review

Sequencing Logic

The calendar follows these principles:

- 1. Adults first, then children.** The spring adults/families workshops (A.2, B.2) establish community familiarity with the Erdpuls approach before school groups arrive. Parents who have attended may then send children with prior context.
- 2. Simple before complex.** Within each target group, the Soil protocol (Appendix A) precedes the Token Economy (B), which precedes Bioregion Mapping (C), which precedes Quality Evaluation (D). Each builds on the capacities developed by the previous.
- 3. Residency in summer.** The longest, deepest engagement (artist/researcher) occupies the season with maximum landscape legibility, longest daylight, and most comfortable outdoor working conditions. The resident's four guide sessions (A.4, B.4, C.4, D.4) are distributed across the residency period.
- 4. Cross-border in autumn.** The harvest season provides natural content for cross-border exchange (shared meal from shared landscape), and the agricultural cycle makes land-use patterns maximally visible.
- 5. Elders in late autumn/winter.** Indoor-focused formats suit the season. The elder guides depend on memory and storytelling rather than outdoor physical activity. The Kaffee und Kuchen atmosphere aligns with the contemplative winter rhythm.
- 6. Quality and synthesis in winter.** Reflection and evaluation happen when outdoor programming pauses. The year's accumulated data is synthesized, the Quality Report compiled, and Year 2 planned.

PART TWO: Workshop Preparation Checklists

Universal Checklist (applies to every workshop)

2 Weeks Before

- ☐ Confirm date, time, and participant numbers
- ☐ Confirm co-facilitator(s) and adult accompaniment (for children's/cross-border workshops)
- ☐ Read the relevant Living Experience Guide in full
- ☐ Read the corresponding Proxemic Supplement
- ☐ Conduct a Proxemic Audit of the planned session (see template below)
- ☐ Order/prepare consumable materials (pH strips, filter paper, worksheets)
- ☐ Check Boden-Koffer inventory and restock as needed
- ☐ For GIS workshops: update QGIS project with latest data layers
- ☐ For cross-border workshops: confirm transport, partner organization, bilingual facilitator
- ☐ **Send participant pre-workshop information (BNE 3.3.1):** confirmation email or letter including: date/time/location, what to wear and bring, what kind of experience to expect, accessibility information and contact for needs, the Erdpuls program context (one-paragraph summary), and contact address (erdpuls@ubec.network) for questions prior to arrival. For school groups: send the Teachers' Guide (`04_teachers_guide.md`) and the relevant student guide to the teacher at this point.

1 Day Before

- ☐ Print all participant materials (field sheets, worksheets, cards)
- ☐ Charge electronic devices (GPS, tablets, camera, audio recorder)
- ☐ Prepare the physical space: seating arrangement, table layout, display materials
- ☐ Set up refreshments (always: water; for elders: full Kaffee und Kuchen; for cross-border: shared meal provisions)
- ☐ Walk the planned route (for transect workshops) and check for hazards
- ☐ Test the projector/screen (for GIS workshops)
- ☐ Lay out materials in the order they will be used
- ☐ Review the Proxemic Audit: which phases need sensory anchors (objects to touch at social/public distance phases)?

Day Of — Before Participants Arrive

- [] Final space check: is the opening arrangement sociopetal or sociofugal as required?
- [] For outdoor workshops: check weather and prepare contingency (rain plan, sun protection)
- [] Set the emotional tone: the space should feel welcoming, not institutional. Music during setup (optional). Flowers or greenery on tables. The smell of coffee if elders are coming.

After the Workshop

- [] Photograph all produced materials (pattern cards, maps, worksheets, posters)
- [] Archive photographs and worksheets in the documentation system
- [] Enter GPS tracks and transition data into the QGIS project
- [] Enter token activities into the token ledger
- [] Write a brief facilitator reflection (15 min): What worked? What didn't? What would I change? What proxemic observations did I make? — This becomes BNE Area 5.2.1 evidence (continuous practice reflection).
- [] Clean and restock equipment. Return Boden-Koffer to its shelf.
- [] **Send participant follow-up resources within 5 days (BNE 3.3.3):** a brief thank-you message confirming what the group contributed (pattern cards, citizen science data, token records), links to any open data they generated (openSenseMap station, iNaturalist observations), pointer to next seasonal workshop opportunity and booking contact, and for school groups: the post-visit classroom activities from the Teachers' Guide. For returning participants or those who request it: the relevant OER guide (01–05) as a PDF download link.

The Proxemic Audit Template

Complete this for every workshop, as part of the 2-weeks-before preparation.

Phase #	Phase Name	Duration	Proxemic Zone (Intimate / Personal / Social / Public)	Sensory Channels Active (T=touch, S=smell, Th=thermal, A=auditory, V=visual)	Arrangement (Sociopetal / Sociofugal / Mixed)	Vertical (Level / Facilitator above / Participant above)	Sensory Anchor Object	C O M N
1								
2								

Phase #	Phase Name	Duration	Proxemic Zone (Intimate / Personal / Social / Public)	Sensory Channels Active (T=touch, S=smell, Th=thermal, A=auditory, V=visual)	Arrangement (Sociopetal / Sociofugal / Mixed)	Vertical (Level / Facilitator above / Participant above)	Sensory Anchor Object	C O M N
3								
4								
5								
6								

Check: Are there 3+ consecutive phases at Social/Public distance with ≤ 2 channels? If yes -> insert a hands-on, sensory-reactivation phase between them.

Check: Does every Social/Public phase have a Sensory Anchor Object prepared? If no -> prepare one (a soil sample, a rock, a tool, a plant, a piece of bread).

PART THREE: Facilitator Requirements and Quality Development

Facilitator Qualification Profile

(BNE Areas 6.1.1 and 6.1.2 — Minimum requirement: one of these must apply)

Every Erdpuls workshop facilitator must meet at least one of the following qualification profiles. Both paths are equally valid for certification purposes.

Path A — Formal Qualification (6.1.1): A completed qualification in education, pedagogy, outdoor education, environmental science, biology, geography, social work, or a related field at vocational training (Ausbildung) level or above. Relevant formal qualifications include: Erzieherin/Erzieher, Dipl.-Pädagogin, B.Sc./M.Sc. Biologie or Geografie, Naturpädagogin, Forstwirtin (with additional pedagogical training), Sozialarbeiterin. The formal qualification must be supplemented by demonstrated familiarity with the Pattern Discovery Toolkit through the preparatory continuing education described below.

Path B — Personal Qualification (6.1.2): Demonstrated practical experience, knowledge, references, and prior activity that are appropriate for the target group, subject matter, learning site, and methodology. Adequate personal qualification for Erdpuls includes: at minimum two years of facilitation experience with the relevant target group, demonstrable place knowledge of the Müllrose / Naturpark Schlaubetal area, ability to facilitate both indoor and outdoor phases, and successful completion of the Erdpuls Preparatory Study program described below.

Additional requirements for specific workshop types: - *Cross-border workshops (A.5, B.5, C.5, D.5):* At least one co-facilitator must meet the qualification requirement above in Polish educational context. Bilingual facilitation is mandatory, not optional. - *Workshops with children under 12:* At least one facilitator must hold a valid first-aid certificate (Erste-Hilfe-Bescheinigung, valid within last 3 years). - *Overnight or multi-day workshops:* Additional safeguarding qualification required; risk assessment on file before the workshop runs.

Guest facilitators and volunteers: Volunteers and guest facilitators (e.g., artists-in-residence, Polish partner educators) who take on facilitation responsibilities must be briefed on the relevant guide, the Proxemic Audit, and the safety protocols before the workshop. They do not need to satisfy the full qualification profile above, but the lead facilitator who does must be present throughout.

Continuing Education Requirements

(BNE Areas 6.2.1 and 6.2.2 — Both are minimum requirements)

Preparatory Continuing Education — 6.2.1

Before leading their first Erdpuls workshop, every new facilitator completes the Erdpuls Preparatory Study program:

Component	Format	Minimum Time
Full reading of the Pattern Discovery Toolkit and Appendices A–D	Self-study	6–8 hours
Full reading of the Proxemic Integration document	Self-study	4–5 hours
Solo walk of all planned transect routes with Ring 0 body calibration	Field	1 day
Attendance at one complete Erdpuls workshop as an observer	On-site	3–8 hours
Completion of a supervised Proxemic Audit for the first planned workshop	Supervised	1–2 hours
Briefing session with lead facilitator or project coordinator	Conversation	1–2 hours

Completion of preparatory study is recorded in the facilitator's personal log and cited in BNE certification evidence. For volunteers: the project coordinator confirms preparatory readiness in writing before their first facilitation engagement.

Ongoing Continuing Education — 6.2.2

All Erdpuls facilitators (including volunteers) participate in annual continuing education with explicit BNE relevance, totalling a minimum of 24 hours per year. This requirement is met through a combination of:

Activity	BNE Relevance	Typical Hours
Annual Data Synthesis (Jan W4 — mandatory for lead facilitators)	5.2.1/5.2.2: practice reflection and systematic evaluation	16–24 hours over 2–3 days
Year-End Quality Report compilation (Feb W2)	5.2.1: continuous reflection; 5.2.2: systematic self-evaluation	8–16 hours

Activity	BNE Relevance	Typical Hours
BNE-Akteur*innen Brandenburg network participation (conferences, regional meetings)	5.3.1: active networking; methodological knowledge	variable, typically 8–16 hours/year
Self-directed professional reading with BNE focus (documented in personal log)	Thematic/methodological knowledge	variable
Peer consultation with other BNE practitioners (kollegiale Beratung)	Methods reflection	variable

For volunteers: The minimum continuing education requirement is satisfied by annual participation in the Year-End Quality Report debrief session (typically 2–3 hours) under facilitator guidance, which functions as the Praxisreflexion unter fachlicher Begleitung required by criterion 6.2.2.

Continuing education is documented in each facilitator's personal log and summarised in the annual Quality Report (see Quality Report Minimum Content Standards below). Facilitators who do not meet the 24-hour minimum in a given year are not eligible to lead workshops independently in the following year until the deficit is addressed.

Partner Network and BNE Cooperation

(BNE Area 5.3 — Minimum requirement: 5.3.1)

The Erdpuls program is embedded in a documented network of national and international BNE partners. Active cooperation with this network is required for certification (5.3.1) and is operationally necessary for the cross-border program (5.3.3).

National partners (ongoing cooperation): - *senseBox/Reedu (Münster)*: Technical methodology cooperation for senseBox deployment, openSenseMap data contribution, and Citizen Science workshop design (5.3.2 conceptual-methodological cooperation). - *Precious Plastic Deutschland / Repair Café Netzwerk*: Zone A circular economy workshop content and materials methodology. - *BNE-Akteurinnen Deutschland*: Annual conference participation, peer consultation, and quality development exchange (5.3.1 active networking). - *Incubator Village Beeskow*:* Regional partnership supporting program development, funding access, and community integration.

International partners (operational for cross-border program): - *Polish partner organization (Appendix A.5, B.5, C.5, D.5)*: The cross-border workshops cannot run without an active Polish partner organization providing co-facilitation, logistical coordination, and bilingual educational materials. This partnership must be confirmed and documented before the autumn season begins (by August W4 at the latest). The partnership agreement should include: joint workshop planning process, bilingual co-

facilitation protocol, shared evaluation of cross-border sessions, and mutual recognition of participant outcomes. This constitutes 5.3.3 (cooperative implementation). - *VULCA European Makerspace Network*: European makerspace methodology exchange and program reflection. - *Stellar Development Foundation*: Technical cooperation for token economy infrastructure.

Facilitation of cooperation: The lead facilitator is responsible for maintaining at minimum one active BNE networking relationship (5.3.1) and documenting cooperation activities in the annual Quality Report. This includes: attending at least one BNE network event per year, sharing one Erdpuls practice example with the network (in any format), and incorporating one external BNE perspective into the year's program planning.

Quality Report — Minimum Content Standards

(BNE Areas 5.2.1 and 5.2.2)

The Year-End Quality Report (compiled in February, based on the Annual Data Synthesis in January) is the primary instrument for BNE Area 5 compliance. It must contain the following minimum content to satisfy the catalog criteria:

Section	Content Required	Criterion
Program Summary	Workshops delivered (number, type, date); total participants by target group; workshops cancelled or modified with reason	5.2.1
Facilitator Reflections	Summary of the 15-min post-workshop reflections written throughout the year; recurrent themes; what changed in facilitation approach as a result	5.2.1
Proxemic Audit Analysis	Review of all Proxemic Audit forms from the year; which proxemic patterns recurred; which interventions were most effective	5.2.1
Participant Outcomes	Compiled Quality Star ratings (D.1), Quality Compass summaries (D.2), Elder Quality Criteria (D.3), Residency Quality Reflections (D.4), Framework Comparison findings (D.5)	5.2.2
Citizen Science Outputs	openSenseMap data contributed; iNaturalist/GBIF records submitted; GPS tracks completed; Pattern Cards added to archive	5.2.2

Section	Content Required	Criterion
Token Economy Summary	Total token transactions recorded; distribution across four elements (Cooperation/Reciprocity/Mutualism/Regeneration); patterns and anomalies	5.2.2
Continuing Education Record	Hours and activities completed by each facilitator toward the 24-hour annual minimum (6.2.2); summary of preparatory study completed by new facilitators (6.2.1)	6.2.1/6.2.2
Partner Cooperation Record	Network activities participated in; cross-border partnership status; any new partnerships established or ended	5.3.1/5.3.3
Identified Improvements	Minimum three specific improvements identified from the year's experience; implementation plan for Year 2	5.2.2
Year 2 Programming Plan	Draft calendar for Year 2 with rationale for any changes from Year 1 sequence	5.1.1/5.1.2

The Quality Report is shared with the Quality Ambassadors (participants who completed the BNE Quality Framework guides D.1–D.5) before Year 2 planning is finalized — this constitutes the internal quality review process required by 5.2.2.

PART FOUR: Printable Workshop Materials

Master List of All Materials Referenced in the Living Experience Guides

The following materials are referenced across the 20 guides. Each is described below with enough detail to produce a print-ready version. They are grouped by type.

Participant Worksheets (A4, printed)

1. Boden-Entdecker-Feldbogen (Soil Explorer Field Sheet) *Referenced in: A.1 (Children), adapted in A.2–A.5* - Side 1: The 13 Questions with response spaces (draw/write/circle) - Side 2: The Measurement Table (Mein Wert / Sensor-Wert columns for temperature, pH, moisture, color, texture, organisms) - Custom SVG icons for each question (previously developed) - Age-differentiated versions: ages 8–10 (simplified, more drawing space), ages 11–14 (standard), ages 15+ (extended with data analysis prompts) - Trilingual headers (DE/EN/PL)

2. Expedition Record Sheet (Bioregion Mapping) *Referenced in: C.1 (Children)* - Side 1: Transition Log table (5 rows: Where / What Changed / Distance / Why a Boundary) - Side 1 also: "The Farthest Point" reflection prompt - Side 2: Blank map space with central dot labeled "ERDPULS" and color key - Proxemic enrichment: Sensory Closure checklist (5 senses × each stop)

3. Learning Portfolio Sheet (Quality Evaluation) *Referenced in: D.1 (Children)* - "Most Important Thing I Learned" (write or draw) - "How I Learned It" (circle options: doing/listening/watching/feeling/talking/being surprised/making a mistake/teaching someone) - "What I Made or Contributed" - "My Competency Discovery" (link to Competency Discovery Card) - "My Quality Star Rating" (5-point hexagon scale × 5 dimensions + 6th proxemic dimension) - "One Thing I Would Change" + "One Question I Still Have"

4. Quality Compass Worksheet *Referenced in: D.2 (Adults)* - Five cardinal directions: Relevance, Experience, Evidence, Access, Continuity - Each direction: assessment space + suggestion space - Proxemic enrichment: "Proximity" section added (was the learning embodied?)

5. Learning Lifetime Worksheet *Referenced in: D.3 (Elders)* - Large print (14pt minimum) - Four sections: Best Learning / Most Useless Learning / Something I Taught / What Young People Should Learn - Simple prompts: What / Who / Where / How old / Why it stayed

6. Exchange Mapping Worksheet *Referenced in: B.2 (Adults)* - A3 format (larger working space) - Central "ME" circle - Radiating circles for exchange partners - Directional arrows (what flows out / what flows in) - Color-coding zone for four elements (Green/Blue/Orange/Gold)

7. Transect Documentation Table *Referenced in: C.1 (Children 13+), C.2 (Adults), C.4 (Artists/ Researchers)* - Columnar format: Distance / GPS / Landscape type / Soil / Plants / Land use / Transition / Photo # - Pre-numbered rows at 200 m intervals (for children) or 500 m intervals (for adults) - Proxemic enrichment column: "Senses active at this stop" (checkboxes)

Cards (Pocket-sized, printed on card stock)

8. Competency Discovery Card *Referenced in: D.1 (Children)* - Credit-card sized, double-sided - Front: 12 Gestaltungskompetenzen in child-friendly first-person language - Back: Erdpuls logo, "I practiced this competency at Erdpuls Müllrose" with date/signature space - Trilingual (DE/EN/PL)

9. Token Cards (Four Colors) *Referenced in: B.1–B.5* - Credit-card sized, four designs: - **Green (Cooperation):** "We did something together." Space for: What / Who / When - **Blue (Reciprocity):** "I gave AND received." Space for: I shared / I learned / Value flowed both directions - **Orange (Mutualism):** "This benefits people beyond us." Space for: Who else benefits / How - **Gold (Regeneration):** "We left this better than we found it." Space for: What improved / How we know - Each card has a unique serial number (for ledger tracking)

10. Memory Offering and Seeking Cards *Referenced in: B.3 (Elders)* - Two types, A6 size: - **Offering cards** (warm color — amber/ochre): "I can share: [a skill / a place history / a natural sign / a recipe / a story / a technology curiosity]" - **Seeking cards** (cool color — sage/teal): "I'm looking for: [a skill from the past / place history / how things were done / a story / what I can offer in exchange]"

Posters and Large-Format Materials

11. Quality Star Poster *Referenced in: D.1 (Children)* - A1 size, displayed on wall - Five-pointed star (+ optional 6th proxemic point) - Each point labeled with child-friendly quality dimension - Dot-voting zones along each arm (1–5 scale) - Reusable (laminated) — dots are removable adhesive

12. Framework Comparison Matrix Poster *Referenced in: D.5 (Cross-Border)* - A0 size - Rows: 8 quality dimensions + 3 blank cross-border rows (+ 1 blank proxemic row) - Columns: Brandenburg / Poland / EU GreenComp / UNESCO / Cross-Border (to be designed) - Pre-filled where possible, with blank cells for group completion

13. Memory Market Ledger *Referenced in: B.3 (Elders)* - Bound A3 book or large poster format - Columnar: Date / Elder name / Younger partner name / What was exchanged / Token elements / Benefit to community - Becomes a permanent display in Zone E

Pattern Card Template

14. Pattern Card *Referenced in: Main Toolkit, Section 3.1* - A5 size, card stock - Fields: Name (trilingual) / Ring / Location / Discoverers / Date & Season / The Tension / What We Observed / Instrumental Data / The Pattern / Connections to Other Patterns / Questions for Further Investigation / Status (first observation / confirmed / contested) - Printed in batches of 50; stored in Zone E card archive

PART FIVE: Spatial Design Guide for the Five Zones

Proxemic Design of the Erdpuls Campus

Each of the five campus zones has a proxemic character that shapes what kinds of learning happen naturally within it. This section provides spatial design guidance for each zone, drawing on the sociopetal/sociofugal distinction and the proxemic audit framework.

Zone A — Circular Economy Workshop (Repair Café, Precious Plastic, Textile)

Proxemic character: Strongly sociopetal. The shared worktable is the center of gravity — participants gather around it, pass tools and materials hand-to-hand, diagnose problems collaboratively. The Repair Café table is the toolkit's primary site of personal-distance economic exchange.

Spatial design recommendations: - Central large table (minimum 1.2 × 2.4 m) at standing-work height (90–95 cm). Participants stand around all four sides — no "front" or "back." - Tools displayed on open pegboard (visual access from any position — sociopetal). - Avoid enclosed workstations or individual benches — these create sociofugal islands. - The Precious Plastic machines occupy one wall but face inward toward the shared space. - Token card station near the exit: participants fill in token cards as they leave, reflecting on what elements their repair activity generated.

Proxemic profile: Intimate (hands-on repair) to Personal (collaborative diagnosis). All sensory channels active: touch (materials), smell (heated plastic, old electronics), thermal (heat gun, iron), auditory (tool sounds, conversation), visual (close inspection).

Zone B — Bio-Materials Garden Laboratory

Proxemic character: Mixed — depends on the activity. Individual garden beds are sociofugal (each person faces their own row). Communal harvest areas, the washing station, and the Boden-Labor outdoor stations are sociopetal.

Spatial design recommendations: - Permanent soil observation stations (3–4 across the garden) marked with posts. Each station has a different soil type or microclimate. These are the sites where Ring 2 observations occur. - A central gathering area (gravel circle, bench ring, or simple cleared space) for group briefings before dispersal. This is the sociopetal anchor of Zone B. - Boden-Koffer storage at the edge of the garden — weatherproof, unlocked during workshops. - The garden path should pass through multiple micro-transitions (cultivated -> wild -> wet -> dry -> shaded -> open) — these are the training transitions for Ring 2 pattern discovery.

Proxemic profile: Intimate (soil handling, plant contact) to Social (garden overview). Full sensory spectrum when close to the ground; vision-dominant when standing and surveying.

Zone C — IoT & Electronics Workshop

Proxemic character: Tends sociofugal. Workbenches with individual solder stations, screens, and components create isolated attention bubbles.

Spatial design recommendations: - At least one large central table for collaborative sensor-building sessions. When groups are building senseBox kits together, the work should be at this shared table, not at individual workstations. - The sensor dashboard display (screen or projector) should be visible from the shared table — so that the "sensor dialogue" (body measurement vs. instrument measurement) can happen in a sociopetal arrangement. - Component bins on open shelving (visible, accessible) rather than in closed drawers (hidden, individual).

Proxemic profile: Personal (soldering, close-up work) to Social (screen display, group discussion). Visual and haptic channels dominant; auditory channel carries instruction.

Zone D — Digital Fabrication

Proxemic character: Machine-centered, tends sociofugal. Each machine (3D printer, laser cutter, CNC) demands individual attention.

Spatial design recommendations: - Separate the design phase (collaborative, sociopetal) from the fabrication phase (individual, sociofugal). A shared CAD design table or projection screen for collaborative design review before anyone approaches a machine. - Display finished objects from past workshops prominently — these are touchable artifacts that maintain intimate/personal proxemic engagement in an otherwise social/public-distance environment. - Material samples (recycled filament, bio-materials from Zone B) on a handling table — participants should touch, bend, smell the materials before designing with them.

Proxemic profile: Personal (machine operation) to Social (design review). Visual-dominant during fabrication; multi-sensory when handling materials.

Zone E — Heritage & Community Hub

Proxemic character: Strongly sociopetal. This is the Erzählcafé, the Wisdom Circle, the shared meal, the Memory Market. Every spatial arrangement should draw people inward.

Spatial design recommendations: - Primary arrangement: circle of chairs (no table barrier) for storytelling, reflection, and deliberation phases. Circle diameter 3–4 m — large enough for 16 people, small enough for soft-voice conversation (personal-to-social proxemic distance). - Secondary arrangement: long table for shared meals. The table should be narrow enough (70–80 cm) that people seated across from each other are within personal proxemic distance. - Display walls for pattern cards, Memory Maps, Quality Star posters, Elder Quality Criteria, Memory Market Ledger — the accumulated

artifacts of the program, visible and touchable. - Good lighting (elder visual accessibility), comfortable temperature (elder thermal comfort), and acoustic management (elder auditory accessibility — reduce echo, eliminate background noise). - The Steilfeuergrube (fire pit) as the ultimate sociopetal center: when available, the fire draws people into a circle, activates all sensory channels (warmth, light, smell of smoke, crackle of flame, flickering visual), and creates the most ancient form of human gathering space.

Proxemic profile: Personal (circle, shared meal) to Intimate (fire, storytelling, object passing). All channels active. This zone should feel like the heart of the campus — the place where everything converges.

PART SIX: The Facilitator's First Season — A Narrative Guide

What to Expect, Month by Month

March: Preparation

You have the documents. You have the campus. You have the equipment (or the shopping list to acquire it). Now you need to prepare the space and yourself.

Week 1–2: Walk every transect route you plan to use this year. Alone. Slowly. Do the Ring 0 body-calibration at the start of each walk. Take notes on transitions. Photograph every point where you would stop with a group. Measure walking times. Identify hazards. This is your embodied preparation — you cannot facilitate what you have not experienced.

Stock the Boden-Koffer. Print the first season's field sheets, worksheets, and cards. Prepare the QGIS project. Test all electronic equipment. Set up the soil observation stations in Zone B.

Week 3–4: Your first workshop — the adults/families soil encounter (A.2). This is deliberately your opening act: adults are the most forgiving audience, the most likely to give you useful feedback, and the most capable of articulating what works and what doesn't. Their feedback shapes your facilitation for the entire year.

April–May: Spring Programming

The rhythm establishes itself. Children arrive with energy and fresh perception. Adults return for the token economy workshop. You learn what your campus can support: how many people fit at the soil stations, how long the garden loop takes, where the GIS projector works best.

The pattern cards begin to accumulate. The first token transactions are recorded. The QGIS project gets its first participant-contributed data layers.

Pay attention to transitions. The moment between soil observation and indoor mapping. The moment between individual reflection and group synthesis. The moment between the game and the debrief. These transitions are where engagement lives or dies — and they are all proxemic moments (moving from intimate to social distance, from sociofugal to sociopetal arrangement). Your Proxemic Audit will help you plan these; your experience will help you feel them.

June–August: Summer Depth

The residency is your deepest engagement. Walking the first transect with the resident is one of the most rewarding experiences the program offers — a full day of sustained attention to landscape, shared with someone whose discipline reveals what you cannot see.

The children's bioregion mapping day (C.1) is logistically the most demanding workshop of the year: off-campus transects with multiple teams, GPS tracking, safety management, and a synthesis session that requires both analog and digital mapping. Run it in July when you have spring experience under your belt.

The Quality Star session (D.1) at the end of the summer children's program produces your first formal evaluation data. Take it seriously: photograph the Star, compile the Portfolio Sheets, write your facilitator reflection. This is the seed of your Quality Report.

September–October: Cross-Border Season

The most logistically complex workshops of the year. Begin coordination with your Polish partner organization in July. Confirm bilingual facilitation, transport, and shared meal provisions by August.

The cross-border soil encounter (A.5) is the emotional center: the moment when participants from two countries kneel in the same soil and discover it is identical. The proxemic significance of this moment — shoulder-to-shoulder across a cultural boundary, mediated by the earth — is the deepest pedagogical mechanism you will deploy all year. Let it breathe. Don't rush.

The two-day bioregion mapping (C.5) is the most ambitious workshop of the year. It requires crossing the border, walking on both sides, and synthesizing data from two countries into a single map. If you can do this, you can do anything in the program.

November–December: Elder Season

The tempo changes. Slower. Warmer. Quieter. The elder workshops require a different facilitation presence: less directive, more spacious, more patient. The Kaffee und Kuchen is not a break — it is the proxemic center of the elder experience. Invest in good cake.

The Memory Map (C.3) and the Wisdom Circle (D.3) produce irreplaceable data. Record everything (with consent). Transcribe promptly. These workshops cannot be repeated with the same participants — every elder's contribution is unique and time-limited.

January–February: Synthesis and Planning

The year's data is spread across pattern cards, field sheets, maps, token records, portfolios, GPS tracks, audio recordings, and photographs. The Annual Data Synthesis brings it together.

Compile: - All pattern cards into a preliminary pattern language (wall display in Zone E) - All GPS tracks and transition data into the QGIS bioregion project - All token transactions into the annual token ledger - All Quality Star, Quality Compass, and Elder Quality Criteria into the Quality Report - All photographs into the documentation archive

The Quality Report is your BNE certification evidence and your program improvement guide. It answers: What did we do? Who did we serve? What did they learn? What should change?

Then: plan Year 2. The calendar repeats, but with new cohorts, accumulated data, and the lessons of experience.

PART SEVEN: Troubleshooting

Common Challenges and Proxemic Solutions

Challenge: Participants lose interest during the mapping synthesis (C.2, C.5). *Proxemic diagnosis:* They have moved from intimate/personal distance (the transect walk) to social/public distance (standing around a projected map) without transition. Three sensory channels closed at once. *Solution:* Bring transect artifacts into the mapping room — soil samples from transition points, rocks from geological boundaries, plants from vegetation edges. Place them on the map at their geographic locations. Now the map has things to touch and smell, and the participants are back in personal proxemic relationship with the territory.

Challenge: Teenagers are embarrassed by the soil protocol. *Proxemic diagnosis:* The soil protocol requires intimate proxemic behavior (kneeling, smelling, handling earth) in front of peers — a high-vulnerability zone for adolescents. *Solution:* Frame it professionally ("this is how geologists work"). Pair participants so they share the vulnerability. Demonstrate first without commentary. Reduce the group observation moments (don't make anyone smell soil in front of 25 peers). The embarrassment usually dissolves within 10 minutes if the facilitator is matter-of-fact.

Challenge: The elder Wisdom Circle is dominated by one or two voices. *Proxemic diagnosis:* Sociopetal space (the circle) invites participation but doesn't distribute it. Dominant voices fill the social proxemic field. *Solution:* Use a talking object (a stone, a tool, an artifact) passed hand to hand. The object is a proxemic mediator: only the person holding it speaks. Its physical weight and warmth create an intimate proxemic relationship between the speaker and the circle's attention.

Challenge: Cross-border participants cluster by nationality. *Proxemic diagnosis:* People default to their cultural proxemic norms, which align with language. German speakers stand with German speakers at familiar German proxemic distances; Polish speakers do the same. *Solution:* Assign cross-national pairs from the start. Give each pair a shared physical task (dig soil together, walk a transect together, prepare food together). The shared task is the proxemic mediator that overrides the cultural default.

Challenge: The GIS exploration feels disconnected from the rest of the day. *Proxemic diagnosis:* The GIS screen creates a sociofugal, public-distance, vision-only environment. It is the most proxemically impoverished phase of any workshop. *Solution:* Never run GIS for more than 20 minutes without a proxemic intervention. Toggle a layer, then pass around a physical sample from that layer. Show a watershed boundary, then pour water on a tilted tray and watch it flow. The GIS is powerful for synthesis but lethal for engagement if it monopolizes the sensory field.

License & Attribution

© 2025–2026 Michel Garand | Erdpuls Müllrose — Center for Sustainability Literacy, Citizen Science and Reciprocal Economics

Licensed under [Creative Commons Attribution-ShareAlike 4.0 International \(CC BY-SA 4.0\)](#)

All software components referenced in this document are licensed under the [GNU Affero General Public License v3.0 \(AGPL-3.0\)](#)

This project uses the services of Claude and Anthropic PBC to inform our decisions and recommendations. This document and its translations were developed with assistance from Claude (Anthropic PBC). All strategic decisions, philosophical positions, and project commitments are those of the author.