Bioregion Mapping — Living Experience Guides

Five Target-Group-Specific Workshop Guides — Appendix C

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Five Target-Group-Specific Workshop Guides Based on Appendix C

Erdpuls Müllrose — Living Laboratory & Makerspace Garden

Version: 1.1
Date: February 2026

Changelog

Version	Date	Changes
1.1	February 2026	Institution name updated; license footer added; version updated for OER publication
1.0	October 2025	Initial release

How to Use These Guides

These five guides each adapt the Structured Bioregion Mapping Protocol (Appendix C of the Pattern Discovery Toolkit) into a living experience for a specific target group. Bioregion mapping is the most expansive activity in the toolkit — it asks participants to discover and define the ecological, hydrological, geological, and cultural unit within which their site exists. Ring 4 work.

This scale presents a unique pedagogical challenge: unlike soil observation (where you kneel) or token economics (where you exchange), bioregional discovery requires *movement through landscape*. It requires walking, looking at horizons, reading water flow, sensing transitions. It demands that participants expand their attention from a patch of ground to a territory — and then negotiate, collectively, where that territory begins and ends.

Each guide therefore balances three modes: **feet** (walking transects, embodied landscape encounter), **hands** (analog mapping with paper, markers, string), and **screen** (GIS exploration with digital data layers). The balance shifts dramatically across target groups — children walk more and map less; researchers map more and walk differently; elders walk through memory more than through space.

The Proxemic Layer: Each guide includes proxemic facilitation notes — spatial design guidance drawing on Edward T. Hall's theory of proxemics (*The Hidden Dimension*, 1966). Bioregion mapping presents the toolkit's greatest proxemic challenge: the bioregion exists at public distance — it can be seen from a hilltop but not touched, smelled, or heard as a whole. The walking transect is the proxemic solution. It carries the body through territory at intimate and personal distance, accumulating a chain of close-range sensory encounters (soil underfoot, forest smell, stream sound, temperature shift) that together produce a felt sense of territory that no map viewed at public distance can deliver. The proxemic notes help facilitators understand the sensory closure pattern (channels closing with distance from campus), scaffold the critical transition from analog mapping (personal/intimate distance, multi-sensory) to GIS exploration (social/public distance, vision-only), and design the boundary deliberation as sociopetal collective negotiation. For the complete proxemic framework, see the *Proxemic Integration* companion document.

Guide 1: Children and Youth — "Where Does Our Place End?" **Guide 2:** Adults and Families — "The Map Beneath the Map" **Guide 3:** Elders and Intergenerational Groups — "The Landscape Remembers" **Guide 4:** Artists and Researchers — "Cartographies of Belonging" **Guide 5:** Cross-Border Groups — "One Landscape, Two Countries"

Guide 1: Wo hört unser Ort auf? — Where Does Our Place End?

For Children and Youth (Ages 8–18, School Classes)

Overview

Title	Wo hört unser Ort auf? / Where Does Our Place End? / Gdzie kończy się nasze miejsce?
Target Group	School classes, youth groups (ages 8–18, with age-differentiated variants)
Group Size	12–30, divided into expedition teams of 4–6
Duration	Full day (5–6 hours) for ages 13+; half day (3–4 hours, campus-based only) for ages 8–12
Location	Erdpuls campus as base; walking transects into surrounding landscape (1–3 km for younger, 3–5 km for older); Zone E for mapping synthesis
Season	Late spring through early autumn (comfortable walking conditions; maximum landscape legibility)
4A-Pathway Focus	Awareness (noticing landscape transitions) and Acknowledgment (recognizing your place as part of a larger system)
Curriculum Links	Geography (landscape, maps, watersheds, orientation), Biology (habitat types, ecotones), History (settlement, land use), Art (landscape observation, mapmaking), Mathematics (scale, distance, coordinates)
Prerequisite	Ideally follows a Questions to the Soil session (Appendix A, Guide 1) — participants who have already examined Ring 2 are ready to expand outward

The Pedagogical Challenge

Children navigate primarily through landmarks, routes, and emotional associations: "the path to school," "the forest where we play," "Oma's house." They rarely think about where their place ends — the boundary of home is defined by permission, familiarity, and habit, not by ecology or geography. Asking "Where does Müllrose end?" seems either obvious (at the town sign) or absurd (why would it end?).

The workshop takes this confusion as its starting point. Through walking, observing transitions, and making maps, children discover that "where we live" has different answers depending on what you pay attention to: the town sign, the soil type, the water flow, the forest edge, the dialect, the bus route. Each answer draws a different boundary. Negotiating among these answers is the workshop's intellectual core.

Preparation and Materials

Per expedition team: - A printed aerial photograph of the Erdpuls campus and surroundings (2–3 km radius, A3 format) — NOT a topographic map (children navigate by recognition, not by contour lines) - Colored pencils (6 colors matching the Appendix C color key: blue for water, green for vegetation, brown for soil/geology, red for buildings/roads, yellow for cultural/social, purple for "felt transitions") - A clipboard or stiff cardboard backing for field drawing - A simple compass (older students) or compass app on a supervised phone - A water bottle, snack, sun protection - The "Expedition Record Sheet" (see below)

For the group: - A large-format satellite image (A1, printed) of the Müllrose area (5–10 km radius) for the synthesis phase - String or yarn in multiple colors - Adhesive dots and small sticky notes - A GIS station: laptop with QGIS, projector, the pre-prepared data layers from Appendix C.4 (for ages 13+) - Smartphones with GPS tracking enabled (for older students; facilitator collects track data afterward)

Advance Preparation: - Scout 2–3 transect routes outward from campus. Each route should be 1–3 km (ages 8–12) or 3–5 km (ages 13+), feasible for the group's mobility, and chosen to cross at least one significant landscape transition (forest edge, river/stream crossing, soil change, settlement boundary, road/rail line, agricultural edge). - For younger groups: a shorter "discovery loop" on and immediately around the campus, chosen to include miniature transitions (garden → path → wild area → building edge → water feature). - Prepare the GIS project with data layers. - Arrange adult accompaniment (1 adult per team minimum for off-campus transects).

The Expedition Record Sheet

Printed A4, one per child, designed for field use.

Side 1: MY EXPEDITION

Name: _ **Team:** ***Date:*** __ Route direction: _ **Weather:** ___

TRANSITION LOG — Every time the landscape changes, stop and record:

Where I am (describe or draw)	What changed? (soil, plants, buildings, sounds, feeling)	Distance from campus (guess)	I think this is a boundary because:

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SENSORY CLOSURE CHECK — At each transition stop, check which senses are still working:

Stop #	Touch (ground underfoot?)	Smell (anything?)	Hear (what?)	Temperature (feel a change?)	See (what's ahead?)
1	☐	☐	☐	☐	☐
2	☐	☐	☐	☐	☐
3	☐	☐	☐	☐	☐
4	☐	☐	☐	☐	☐
5	☐	☐	☐	☐	☐

Pattern to notice: which senses stop working as you get further away?

THE FARTHEST POINT — At the end of the route, look around. "Do I still feel like I'm in 'our place'?" Yes / No / Not sure What makes it feel like here / not here? _____

Side 2: MY MAP

[Large blank box with a dot in the center labeled "ERDPULS"]

"Draw a map of your expedition. Mark: the route you walked, every transition point, and where you think 'our place' ends. Use colors: blue for water, green for plants/forest, brown for soil changes, red for buildings/roads, yellow for special places, purple for where you felt the landscape change."

Welcome and Framing (15 minutes)

Gather outdoors at the campus boundary — the point where the garden meets the surrounding landscape.

For ages 8–12: "Look out there. How far does Müllrose go? Is it just the houses? Does the forest belong to Müllrose? What about the fields? What about the lake? What about the place where the Schlaube river starts?

Today you're going on an expedition — not to somewhere far away, but to the edge of your own place. Your job is to discover: where does *here* become *somewhere else*? Not where the town sign is — that's easy. Where does the land itself change? Where does the forest start? Where does the soil change color? Where does the water flow in a different direction? Those are the real boundaries — and nobody put up a sign for them."

For ages 13–18: "On your phone's map, zoom out from Müllrose. You see a town inside a district inside a state inside a country. All those boundaries are political — humans drew them on paper. Now look at the satellite image. Where are the real boundaries — the ones the landscape draws? The forest edge, the river valleys, the transition from sand to clay, the point where flat becomes hilly?

The concept we're exploring is called a *bioregion* — a territory defined not by politics but by ecology. Today you're going to walk outward from this campus, notice every transition, and come back to propose where the Müllrose bioregion begins and ends. This is genuine geography — not reading a map, but creating one from what you observe."

The Experience: Phase 1 — The Expedition (90–150 minutes)

Ages 8–12 (90 min, campus and immediate surroundings):

Teams walk the pre-scouted "discovery loop" — a circuit of 1–2 km staying near the campus but crossing multiple micro-transitions. The facilitator accompanies and prompts at each transition:

"Stop. What just changed? We were in the garden — now we're on a path. The ground is different. The plants are different. The temperature changed. Can you feel it? Write it down."

Typical transition points for the Müllrose campus area: - Garden bed → gravel path (cultivated to mineral) - Path → wild meadow (managed to unmanaged) - Meadow → forest edge (open to closed canopy — temperature drops, sound changes, smell changes) - Forest → stream/drainage ditch (land to water — the most dramatic transition for children) - Stream → agricultural field (wild to managed, wet to dry) - Field → road (organic to built — sound changes completely) - Road → settlement edge (landscape to village)

At each transition, teams fill in one row of the Transition Log. Encourage them to use all senses: "What does the air smell like here versus there? What sounds stopped? What sounds started?"

Proxemic note — Sensory Closure: At each transition stop, children also complete the Sensory Closure Check. A pattern emerges across the transect: near the campus, all five boxes are checked (touch the soil, smell the garden, hear the chickens, feel the temperature shift at the building edge, see the path ahead). By the third or fourth stop, boxes begin to uncheck — smell fades first (no more garden or compost scent), then sound narrows (familiar campus sounds replaced by undifferentiated wind), then thermal awareness dulls (no more building-wall heat or shade transitions). The last non-visual channel to close marks a proxemically defined boundary: the edge where non-visual connection to the home place fades.

This is not the bioregional boundary — but it is the edge of *felt* belonging, and it is a powerful starting point for the boundary deliberation. "Where did your senses stop telling you that you were still in 'our place'?"

Ages 13–18 (150 min, extended transects):

Teams of 4–6, each with an adult, walk different pre-scouted transect routes outward from the campus in different directions (north, south, east, west — or at least two divergent directions). GPS tracking enabled.

Each team carries the Expedition Record Sheet plus a more detailed transect documentation table:

Distance (m)	GPS point	Landscape type	Soil (if visible)	Dominant plants	Land use	Notable transition	Photograph #
0	[lat,lon]	Campus garden	Dark loam	Cultivated herbs	Garden	—	001
200							
500							

Teams stop every 200–500 meters to record. When they perceive a transition, they stop specifically and document it in detail. They take photographs at every transition point (numbered, matched to the table).

The Turnaround Question: At the farthest point of each transect (determined by time and distance), the facilitator or team leader asks: "Do you still feel like you're in the same place as when we started? What changed? If you had to draw a line on a map marking the boundary of 'our place,' would it be behind us or ahead of us?"

Proxemic enrichment — the Turnaround Moment: At the farthest point, pause for a proxemic inventory. "What can you still sense from Müllrose? Can you smell the campus? Hear the town? Feel the specific microclimate of the garden on your skin? See the campus buildings? The Sensory Closure pattern has been operating throughout your walk: channels have been closing with distance. Which is the last non-visual channel still active? That point — where you can still smell, or hear, or feel the home place, but only just — is the proxemic edge of your felt connection to Müllrose. Beyond it, you may know intellectually that you're 'near Müllrose,' but your body no longer confirms it." This proxemic inventory transforms the Turnaround Moment from an intellectual reflection into an embodied sensory exercise that gives adults a concrete bodily reference for the abstract concept of bioregional belonging.

The Experience: Phase 2 — Map Making (60 minutes)

Return to Zone E. Large satellite image spread on the floor or table.

Ages 8–12: Each child draws their expedition map on the blank map space of the Record Sheet (Side 2). These are not precise — they are memory maps, emotional cartographies. The facilitator helps orient them: "The campus is here. You walked this way. Where was the forest? Where was the stream?"

Then, one team at a time, children place their transition points onto the large shared satellite image using adhesive dots (color-coded: blue for water transitions, green for vegetation, etc.). The cumulative effect of all teams' dots reveals the landscape structure: clusters of dots where transitions concentrate, gaps where landscape is uniform.

Ages 13–18: Two parallel tracks, as per Appendix C:

Analog track (30 min): Teams transfer their transect observations onto the shared satellite image using colored markers on transparent overlays. Each team's route is a different color. Transition points marked and labeled.

GIS track (30 min): GPS tracks from smartphones are imported into the pre-prepared QGIS project. The facilitator projects the GIS screen. Together, the group explores: - "Toggle the hydrology layer. Do your transition points align with streams or watershed boundaries?" - "Toggle the geology layer. Did the soil change where the geological map says it should?" - "Toggle the land cover layer. Where does the CORINE data say the landscape changes — and did you notice it on the ground?" - "Measure: how far did each team walk? Which team crossed the most transitions?"

The comparison between what participants felt on the ground and what the data layers show is the learning moment. Sometimes they align perfectly (the stream where Team North noticed a transition matches a watershed boundary on the hydrology layer). Sometimes they diverge (Team East felt a transition at the road, but the geology says the real substrate change is 300 m further — they noticed the human boundary, not the natural one).

The Experience: Phase 3 — Boundary Deliberation (30–45 minutes)

Proxemic note: The boundary deliberation is a strongly sociopetal exercise — all participants gathered around a shared map on a table or floor, leaning in, reaching across, placing string. The physical arrangement (bodies around a map at personal distance, hands manipulating shared materials) is the proxemic counterpart to the sociofugal dispersal of the transect phase (individuals walking outward into landscape). The transition from dispersed walking to gathered deliberation mirrors the Ring 4 → Ring 0 return: the body went outward into public-distance territory, and now brings what it found back to personal-distance community. The facilitator should ensure the map is large enough and low enough that all participants can lean over it simultaneously — standing around a wall-mounted map pushes the deliberation to social distance and reduces the haptic, negotiated quality of the string-laying.

Ages 8–12: The facilitator draws attention to the clusters of colored dots on the satellite image.

"Look — lots of transition dots here, here, and here. Not many there or there. The landscape is telling us something: the changes happen in certain places, and those places might be the edges of our bioregion."

Using yarn, the facilitator guides the children to lay a proposed boundary on the satellite image, connecting the transition clusters. This is a collective, physical negotiation — children literally argue about where the string should go. "No, it should go around the forest!" "But the lake is on the other side!" "The stream goes this way!"

There is no requirement for agreement. Two or three proposed boundaries can coexist on the map, each a different color of yarn, each representing a different interpretation.

Ages 13–18: The deliberation is more structured and more contentious. The facilitator poses:

"You have six kinds of evidence: water (watershed), geology (soil type), vegetation (forest/field), land use (agriculture/settlement), cultural features (churches, markets, gathering places), and your felt transitions. Each suggests a slightly different boundary. Which do you follow?"

Teams advocate for different criteria. The watershed team argues that water defines the bioregion ("all rain that falls within this boundary flows to the same place"). The vegetation team argues that the forest defines it ("the Schlaubetal forest is the heart of our bioregion"). The cultural team argues that the market-town catchment defines it ("people who shop in Müllrose are part of Müllrose's bioregion").

The facilitator does not resolve this. The disagreement IS the learning. "A bioregion is not a fact to be discovered but a relationship to be negotiated. You're doing that negotiation right now."

Multiple boundary proposals are recorded — drawn on the map, labeled with the criteria used, attributed to the team that proposed them.

Sensor Dialogue (10 minutes)

"The Erdpuls sensor network monitors a specific area — the campus. But the water that reaches our soil comes from further away. The air that the sensors measure blows in from the west. The temperature we record is shaped by the forest cover kilometers away. The sensor network measures a point, but that point exists inside a bioregion. Today you began to define that bioregion — and now the sensor data has a context it didn't have before."

For older students: "If we wanted to monitor the whole bioregion you proposed, where would we place additional sensors? What would they need to measure?"

Citizen Science Output

Ages 8–12: - Colored-dot transition map on the satellite image → photographed for the Erdpuls archive - Individual expedition maps → collected and displayed in Zone E - The yarn boundary → photographed and archived as "First Bioregion Proposal, [Date], by [Class]"

Ages 13–18: - GPS tracks imported into QGIS → saved as a layer in the Erdpuls GIS project - Transition points with coordinates, descriptions, and photographs → entered into the observation database - Boundary proposals digitized into QGIS → "Proposed Bioregion Boundaries" layer - Full transect documentation tables → part of the longitudinal data record

Each subsequent school group that repeats this exercise adds to the dataset. Over months and years, the accumulated transition observations and boundary proposals converge toward a community-defined bioregion — one that was not drawn by a geographer but discovered by dozens of young people walking outward from a single garden.

Closing and Reflection (15 minutes)

Circle, outdoors if weather permits.

Ages 8–12: "What was the most surprising boundary you discovered today? One you wouldn't have noticed if you hadn't been looking?"

Ages 13–18: "If the Müllrose bioregion crosses the border into Poland — and the geology says it does — what does that mean? Who is responsible for a bioregion that belongs to two countries? Does the river care which side of the border it's on?"

The facilitator connects to the wider toolkit: "The pattern cards you've made in previous workshops — about the soil, the buildings, the garden — now have a home. They belong to this bioregion. Your bioregion. The one you just discovered."

Token Economy Integration

Activity	Token Element
Walking a full transect and completing the Expedition Record	Cooperation
Recording transition points with descriptions and photographs	Mutualism (data enters commons)
Contributing GPS track data to the QGIS project	Mutualism
Participating in the boundary deliberation	Cooperation
Proposing and arguing for a boundary based on evidence	Reciprocity (knowledge flows between teams)
Creating an expedition map (individual drawing)	Mutualism (becomes part of the archive)

Facilitator Notes

Safety on transects: The walking phase takes children off-campus into real landscape. Risk assessment mandatory: check routes for road crossings, water hazards, uneven terrain, livestock. Adult accompaniment ratio 1:6 minimum. Carry first aid kit, emergency contacts, and a mobile phone per team. Brief accompanying adults on the educational purpose — they should not rush the group past transition points.

The "boring" middle: Children often find the first and last transition exciting but the middle of a transect monotonous ("it's just fields"). This boredom is itself data: "What does it mean that this stretch feels the same for a whole kilometer? That's a landscape unit — a zone of uniformity between two transitions." The facilitator can model finding interest in apparent uniformity.

Weather dependency: Unlike the soil protocol (which works in any weather), transect walking is weather-dependent. Rain is manageable with gear; extreme heat or thunderstorms require postponement. Have a campus-only backup plan (the indoor GIS exploration and mapping synthesis can be conducted using photographs and data from a previous group's transect).

Seasonal Variations

Season	Transect Adaptation
Spring	Maximum contrast: some areas green and growing, others still dormant. The phenological gradient (what has leafed out, what hasn't) is itself a transition indicator.
Summer	Maximum vegetation density — transitions may be harder to see. Compensation: soil moisture contrasts strongest, agricultural land use most visible (crops identify field boundaries).
Autumn	Color changes reveal species composition. Forest/field edges dramatized by leaf fall. Harvest activity makes agricultural boundaries visible.
Winter	Vegetation stripped back: landform and geology most visible. Water features (frozen/unfrozen) most dramatic. Settlement/countryside contrast sharpest. Best for terrain reading but requires cold-weather preparation.

Proxemic Design Notes

The transect as proxemic chain. The walking transect is the proxemic solution to the bioregion's fundamental challenge: the territory exists at public distance (visible from a hilltop but not touchable, smellable, or hearable as a whole). Walking carries the body through the territory at intimate and personal distance — each step produces sensory contact (soil underfoot, air temperature on skin, smell of forest or field, sound of water or wind). The chain of intimate encounters, accumulated over 1–5 km, builds a felt sense of territory that cannot be achieved by looking at a map.

The Sensory Closure pattern as proxemic boundary tool. The Sensory Closure Check on the Expedition Record Sheet produces a concrete dataset: at which stop did each sensory channel close? The pattern — all channels active near campus, progressive closure outward, vision the last remaining channel at maximum distance — is a proxemically defined portrait of the participant's relationship to the

territory. The point where the last non-visual channel closes is not the bioregional boundary, but it is a boundary of *felt belonging* that gives children a bodily reference point for the abstract question "Where does our place end?"

The analog-to-GIS transition as proxemic shift. Moving from the walking transect (intimate/personal distance, all channels) to GIS exploration (social/public distance, vision-only) is the most proxemically jarring transition in the bioregion guides. Scaffold it: during the GIS phase, have soil samples, rocks, or plant specimens from the transect on the table next to the laptop. "Toggle the geology layer — and now feel this sample from Stop 3. That's the same data." The physical objects maintain a haptic proxemic connection while the cognitive work operates at screen distance.

The "boring" middle as proxemic information. When children report boredom during a uniform stretch of the transect, the Sensory Closure Check provides language: "Check your boxes. Are all five senses still active, or have some closed? If the landscape feels 'boring,' it may be because there's no sensory transition to wake you up — you're in a proxemic plateau. That plateau is itself a landscape unit."

Guide 2: Die Karte unter der Karte — The Map Beneath the Map

For Adults and Families (Open Community Format)

Overview

Title	Die Karte unter der Karte / The Map Beneath the Map / Mapa pod mapą
Target Group	Adults, families, community members, garden and nature enthusiasts
Group Size	8–20
Duration	Full day (6–7 hours with meal) or two half-days (Day 1: walking; Day 2: mapping)
Location	Walking transects from Erdpuls campus (5–8 km); Zone E for mapping synthesis
Season	All seasons; autumn and late winter offer maximum landscape legibility
4A-Pathway Focus	Full pathway, with emphasis on Attitude (how landscape understanding changes behavior) and Action (participating in bioregional stewardship)
Practical Connection	Land use planning, watershed awareness, Naturpark engagement, cross-municipal cooperation, informed voting on regional development

The Pedagogical Challenge with Adults

Adults in rural Brandenburg navigate their landscape daily — commuting, shopping, visiting, recreating — but rarely *read* it. The administrative map (Landkreis Oder-Spree, the town boundary, the postal code area) is so dominant that the ecological map has become invisible. Adults know they live "in Müllrose, in Brandenburg, in Germany" but not "in the Schlaube watershed, on glacial outwash sand, at the edge of a Pleistocene terminal moraine, in a bioregion that extends into Poland."

The workshop title captures the approach: there is a map beneath the administrative map — a map drawn by water, ice, soil, and vegetation over millennia — and it is more relevant to sustainability than any political boundary. Discovering this map is the experience.

Preparation and Materials

All materials from Appendix C.3 (analog track) and C.4 (GIS track): - Large-format topographic maps and satellite imagery (A1, printed, 2 copies) - Transparent overlays or tracing paper - Colored markers (6 colors per Appendix C color key) - String/yarn in multiple colors - Pre-prepared QGIS project with all 9 data layers (hydrology, elevation, geology, land cover, protected areas, historical maps, citizen science data, administrative boundaries, basemap) - Laptop, projector, large screen or wall - GPS-equipped smartphones for transect tracking - Printed transect documentation tables (one per person) - Rucksacks with water, snacks, rain gear for the walking phase - Binoculars (2–3 pairs) for landscape overview from elevated points - The pattern cards from any previous Rings 1–3 workshops conducted at Erdpuls

Welcome and Framing (15 minutes)

Gather at an elevated viewpoint near the campus — any point with a landscape vista. If no natural viewpoint exists, use the highest floor of a campus building or a gentle rise.

"Look at this landscape. You know it — you drive through it, walk through it, live in it. But today I want to ask you a question you may never have been asked: what is this landscape *made of*? Not the houses, not the roads — those are recent. What was here before? What is the substrate that everything sits on?

About 15,000 years ago, a glacier stood roughly where we're standing now. It was the Weichselian ice sheet, and it covered everything you can see. When it retreated, it left behind everything that defines this landscape: the moraines (the ridges), the outwash plains (the sandy flatlands), the glacial valleys (the Schlaubetal, the Oder valley), the lakes (kettles where ice blocks melted). The soil under your feet, the forests, the water — everything is glacial inheritance.

Today we trace that inheritance. We walk outward, read the landscape, and then come back to draw the map beneath the map — the bioregional map that the glacier drew and that no politician has erased."

The Experience: Phase 1 — Walking Transects (3–4 hours)

Divide into 2–3 teams, each walking a different transect route of 5–8 km. Routes are pre-scouted to cross maximum landscape transitions and, ideally, to reach an elevated viewpoint at the turning point.

Suggested transect directions from Müllrose: - **North/Northwest** toward the Schlaubetal: crosses the transition from settlement to agricultural land to forest to river valley. The Schlaube gorge is a dramatic glacial feature. - **South/Southeast** toward the Oder flatland: crosses from glacial moraine landscape to the broad, flat Oder valley — a profound geological transition. - **East** toward the Polish border: crosses agricultural land, forest, and approaches the Oder — the political boundary cuts through continuous landscape.

Transect Protocol: Teams stop at regular intervals (every 500 m or at every perceived transition) and complete the documentation table. In addition to the Appendix C transect format, adults are asked:

At each stop: 1. *What does the ground feel like underfoot?* (Hard/soft, sandy/clayey, wet/dry, level/sloping) 2. *What can you hear from here?* (Wind direction, distant sounds, birdsong character, traffic, water) 3. *What is the dominant vegetation within 50 meters?* (Forest type, field crop, meadow, wetland, ruderal) 4. *What is the human imprint?* (Field boundaries, drainage ditches, roads, buildings, fences, power lines) 5. *If you were dropped here blindfolded — could you tell it's Müllrose? What would be missing?*

At the turnaround point (elevated viewpoint if possible): The team pauses for 10–15 minutes. Each person writes a "Landscape Letter" — a short paragraph addressed to the landscape:

"Dear landscape, from here I see **. *What surprises me is*** . What I understand now that I didn't before is **. *The boundary I think I'm seeing is*** ."

These letters are not shared publicly unless participants choose to — they are a reflective practice, a Goethean moment of integration before the walk back.

The Experience: Phase 2 — Mapping Synthesis (2–2.5 hours)

Return to Zone E. The full Appendix C mapping protocol unfolds:

Step 1 — Orientation (20 min): Spread the topographic map and satellite image. Teams place their transect routes on the map, mark transition points. Initial observations and surprises.

Step 2 — Water Layer (30 min): Using transparent overlay and blue markers, trace all water features. Then the key exercise: trace the watershed boundary. The facilitator explains watershed reading from contour lines (for those unfamiliar) and guides the group to identify the ridgeline separating the Schlaube/Oder drainage from adjacent catchments.

This is often the first time adults realize that water defines territory more fundamentally than any political boundary. "All rain that falls inside this line ends up in the same place. All rain outside goes somewhere else. That is the most basic fact about where you live."

Step 3 — Geology and Soil (20 min): Brown markers on a second overlay. Transition points from transects that corresponded to soil or terrain changes are marked. If available, the BGR geological map is displayed on the GIS screen for comparison.

Step 4 — Vegetation and Land Use (20 min): Green and red markers. Forest blocks, agricultural zones, settlement areas.

Step 5 — Cultural Layer (20 min): Yellow markers. This is where local knowledge enriches the map: participants mark churches, markets, schools, Naturpark boundaries, traditional gathering places, known cultural routes.

Step 6 — GIS Exploration (30 min): The facilitator toggles through the digital layers while the group watches on the projected screen. The analog map on the table and the digital map on the wall are compared in real time:

Proxemic note — the analog/GIS tension: The GIS phase is the most proxemically impoverished moment in the bioregion guides. Participants who spent the morning at intimate distance with the landscape (soil underfoot, forest smell, stream sound, thermal shifts) now sit at social/public distance from a projected screen, using vision only. The analog map on the table provides a partial proxemic bridge — participants can lean over it, touch it, point to spots they walked. The facilitator should actively maintain this bridge: "Toggle the hydrology layer on the screen — and now find that stream crossing on the paper map where you got your boots wet this morning. Same data, two proxemic distances. The screen shows you the pattern; your wet boots tell you it's real." Never run GIS exploration for more than 20 minutes without a proxemic intervention: pass a soil sample, pour water on a tilted tray to demonstrate watershed flow, have participants stand and point toward where their transect went. - "The watershed boundary we drew by hand — here it is from the DEM. How close were we?" - "The Naturpark Schlaubetal boundary — does it follow any of our landscape boundaries?" - "The Landkreis boundary — does it follow the watershed, the geology, or neither?" - Historical map comparison: "Here's the Prussian Urmesstischblatt from the 1850s. What has changed? What has stayed the same?"

Step 7 — Boundary Deliberation (30 min): Using string, the group collectively proposes a bioregional boundary. The adult deliberation is typically more nuanced than children's — adults weigh competing criteria, acknowledge that different definitions produce different boundaries, and may decide that the bioregion has a "core" and a "transition zone" rather than a hard edge.

Proxemic note: The string-laying is a sociopetal, haptic negotiation — participants leaning over a shared map at personal distance, physically placing and adjusting string, reaching across each other's space. This spatial arrangement is the proxemic counterpart to the deliberative process: the boundary is negotiated not through formal debate at social distance but through physical handling at personal distance. When two participants disagree about where the string should go, they are simultaneously engaged in a spatial negotiation (their hands competing for the same string, their bodies negotiating personal space over the map) and a conceptual negotiation (watershed vs. vegetation vs. settlement). The facilitator should let both negotiations proceed — the spatial one often resolves the conceptual one. "You're both pulling the string in different directions. Leave both pieces on the map — that's two boundary proposals, and the territory between them is the transition zone."

Closing and Meal (30 minutes)

The shared meal connects to the bioregional theme: "Every ingredient on this table came from somewhere within or near the bioregion you just mapped. The bread — which bakery? The vegetables — which farm? The water — which aquifer? When you eat, you eat your bioregion."

Each participant shares one sentence: "The map beneath my map is ___."

Citizen Science Output

- Transect GPS tracks and transition documentation → entered into the Erdpuls GIS project
- The composite analog map (photographed at high resolution) → archived
- The proposed bioregional boundary → digitized into QGIS
- "Landscape Letters" from the turnaround points → (with consent) entered into the Erdpuls writing archive
- The entire session → documented as a data point in the longitudinal bioregion-definition process

Token Economy Integration

Activity	Token Element
Walking a full transect with documentation	Cooperation
Contributing transition data and GPS tracks	Mutualism
Participating in the mapping synthesis	Cooperation
Contributing local/cultural knowledge to the cultural layer	Reciprocity
Proposing a bioregional boundary with rationale	Cooperation + Mutualism
Returning for a seasonal repeat transect	Regeneration

Facilitator Notes

Fitness levels vary. Transects of 5–8 km are moderate but may challenge some participants. Offer a shorter route option (3 km) and ensure no one feels excluded. The shorter transect still crosses meaningful transitions.

The GIS operator is essential. Unlike the children's guide (where GIS is a supplement), the adult guide depends on the analog-digital synthesis. Have a competent QGIS operator who can toggle layers, zoom, and annotate in real time while the group directs.

Political sensitivity of bioregional thinking. Some participants may resist the idea that political boundaries are "arbitrary" — they have real consequences (taxes, schools, policing). The facilitator should acknowledge this: "Political boundaries are real and important. But they are not the only real boundaries. The watershed, the soil type, the vegetation community — these are also real, and they shape your life in ways the administrative map does not show."

Proxemic Design Notes

The transect as proxemic antidote to map-distance. Adults arrive with the most deeply ingrained habit of viewing landscape from public distance — through car windows, on screens, via administrative maps. The walking transect forcibly relocates them to intimate and personal distance with the landscape: soil underfoot, plant textures at hand height, forest smell in the nostrils, stream sound in the ears. The Turnaround Moment proxemic inventory makes this relocation conscious: "You have been at intimate distance with this territory for three hours. Now check: which senses still connect you to Müllrose?"

The Landscape Letter as proxemic reflection. The writing exercise at the turnaround point is an intimate-distance activity: the participant sits in the landscape, looks from a specific proxemic position, and writes to the landscape as if to a person. This personalization of the landscape-observer relationship is a proxemic move — it places the territory at personal distance rather than public distance. The letters should not be shared unless participants choose to; the proxemic intimacy of the exercise requires protection.

The closing meal as bioregional proxemic synthesis. "Every ingredient on this table came from within or near the bioregion you just mapped." The meal brings the bioregion from public distance (mapped territory, projected data layers) to intimate distance (taste, smell, texture, warmth). The bread from the local bakery is a proxemic encounter with the local wheat field. The soup from the campus garden is a proxemic encounter with the soil the participant held in their hands that morning. The meal is not a metaphor — it is the bioregion at intimate proxemic distance, in the body.

Guide 3: Die Landschaft erinnert sich — The Landscape Remembers

For Elders and Intergenerational Groups

Overview

Title	Die Landschaft erinnert sich / The Landscape Remembers / Krajobraz pamięta
Target Group	Older residents (60+), paired with younger participants
Group Size	8–16 (balanced elder/younger)
Duration	Half day (3–3.5 hours) — indoor-focused with optional short walk
Location	Zone E (Heritage Hub) as base; optional short walk (500 m–1 km) to a nearby viewpoint or significant landscape feature
Season	Winter or early spring (indoor comfort; landscape stripped to structure)
4A-Pathway Focus	Acknowledgment (recognizing lifelong landscape knowledge as bioregional data)
Unique Value	Elders have witnessed landscape change — their memories are a temporal transect no map can replicate

The Core Principle: Memory as Transect

A walking transect traverses *space* — you move outward and record what changes. Elder memory traverses *time* — you stay in one place and remember what changed. Both are methods of reading landscape. Both produce transition data. Both reveal boundaries.

Proxemic note — memory as temporal extension of the proxemic field: Hall's proxemics describes the space surrounding the body in the present moment. But elder memory extends the proxemic field across time. When an elder remembers the smell of a vanished orchard, they are in intimate proxemic relationship with a physically absent place — the memory carries touch, smell, sound, and thermal sensation across decades. When they remember a stream that no longer flows, they hold an intimate-distance relationship with water that current participants can only access at public distance (on a

historical map). The elder's temporal transect is therefore a proxemic transect as well: it reveals not just what the landscape *was*, but what it felt, smelled, sounded, and tasted like. These are data that no GIS layer contains and no satellite image captures — they are proxemic data from a different time.

An elder who has lived in Müllrose for sixty years has watched fields become forest, forest become fields, streams move, roads appear, buildings rise and fall, species arrive and vanish. This temporal transect is a dataset that no GIS layer contains and no walking group can reproduce. It is, in bioregional terms, the most valuable data source this community possesses — and it is being lost with every year that passes without recording it.

This guide is therefore as much an archival exercise as a mapping exercise. It produces a "Landscape Memory Map" — a document that layers elder testimony over contemporary cartography, creating a temporal depth that transforms the bioregion from a snapshot into a story.

Preparation and Materials

- Large-format satellite image of Müllrose and surroundings (A1, current)
- Historical maps: at minimum two epochs (pre-1945 if available, post-war/DDR era, and current). The Prussian Urmesstischblätter and DDR-era topographic maps are ideal for Brandenburg.
- Historical aerial photographs if available (the Landesvermessung Brandenburg may have archives)
- Large-format blank paper (A1) for the "Memory Map"
- Colored markers (gentle colors — pastels preferred over harsh primary colors for elder-friendly visibility)
- Adhesive dots in multiple sizes
- Audio recorder with consent forms
- Comfortable seating in a well-lit room
- Tea, coffee, and Kuchen (served throughout, not as a break — the atmosphere should be Erzählcafé, a storytelling café)

Welcome and Framing (15 minutes)

Seated, beverages served.

"In the other mapping workshops, people walk outward from this campus and try to find where our bioregion ends. Today we do something different. We stay here — but we travel in time. Because every one of you has already walked a transect through this landscape. You've walked it for forty, fifty, sixty, seventy years. And on that walk, the landscape changed around you.

You remember fields that are now forests. You remember streams that no longer flow. You remember a Müllrose that looked different, smelled different, sounded different. That memory is not nostalgia — it is data. It is the most important data anyone in this room possesses about this landscape, because it cannot be measured, cannot be photographed, cannot be reconstructed. It exists only in your minds.

Today we create a map that holds your memory — a map that shows not just where things are, but where they were, and how they changed."

The Experience: Phase 1 — Map Orientation and Historical Comparison (30 minutes)

Spread the current satellite image and the historical maps on adjacent tables.

Step 1: Let elders simply look at the maps. Do not direct their attention. The first observations are often the most revealing: "Look — this was all fields then. Now it's forest." "That road didn't exist." "The lake was bigger." "There were houses here — they're gone."

Step 2: The facilitator guides comparison between epochs: - "What do you see on the old map that is gone from the new one?" - "What do you see on the new map that wasn't on the old one?" - "Where is the landscape the same — unchanged across decades?"

Younger participants scribe: they write sticky notes with the elder observations and place them on the current satellite image at the relevant location. Each note includes the elder's name, the approximate date of the remembered condition, and a brief description.

The Experience: Phase 2 — Thematic Memory Layers (60 minutes)

Using the large blank A1 paper as the "Memory Map" (with a simple outline of the current landscape traced from the satellite image), the group builds temporal layers:

Water Memory (15 min): "Where did water used to be that is no longer there? Streams that dried up, ponds that were drained, springs that stopped flowing, areas that flooded regularly? Where does water appear now that wasn't there before?"

Elders mark remembered water features in blue. These often reveal: drained wetlands (DDR agricultural intensification), channeled streams (straightened for drainage), new ponds (gravel pit flooding), changed flood patterns.

Forest and Vegetation Memory (15 min): "What grew where? Were the forests bigger or smaller when you were young? Were there orchards that are now gone? Were there meadows that are now plowed? Are there plants you remember that you no longer see?"

Green markers on the Memory Map. Common revelations in Brandenburg: massive afforestation of former agricultural land after reunification; loss of hedgerows during DDR collectivization; disappearance of specific meadow flowers due to fertilization.

Settlement and Land Use Memory (15 min): "Where were the farms? The factories? The roads? What buildings are gone? What has been built in your lifetime? Where did the boundary between village and countryside used to be — and where is it now?"

Red markers. The urbanization, deindustrialization, and demographic change of rural Brandenburg become visible.

Sound and Smell Memory (15 min): "What did this landscape sound like when you were young? More birds? Different birds? Tractors instead of horses? Aircraft? Wind turbines? What did it smell like? Manure from certain fields? Smoke from certain factories? Blossoms from orchards that are gone?"

This layer cannot be drawn on a map — it is recorded on audio and transcribed. But it is some of the most powerful bioregional data. Sound and smell define territory as surely as watershed or soil type, and their change over time reveals ecological and economic transformation.

Proxemic note: Sound and smell are the proxemic channels that define territory at a scale larger than touch but smaller than sight. When an elder says "You could smell the Backsteinwerk from here" or "The nightingales used to sing along the whole Schlaube — now only from Ragower Mühle southward," they are mapping proxemic boundaries: the reach of sound and smell from specific sources across the landscape. These boundaries have contracted or shifted over decades — and the contraction is itself a bioregional datum. A sound/smell boundary that has retreated means the territory's sensory reach has shrunk. The elder's memory of its former extent is the only record of its proxemic geography.

The Experience: Phase 3 — The Temporal Bioregion (20 minutes)

Now the Memory Map is full of colored marks and sticky notes. The facilitator brings the group together around it.

"You have drawn a map that no satellite can take and no computer can generate. It shows not one landscape but many — the landscape of your childhood, your adulthood, and today, all overlaid.

Now: look at the boundaries. When you were young, where did 'our place' end? Was it the same as now? Did you travel differently — by foot, by bicycle, by train? Was your lived bioregion larger or smaller than it is today?"

This discussion often reveals that elder bioregions were simultaneously more local (they walked more, knew every field by name within a few kilometers) and more connected (regional rail networks, seasonal labor patterns, and market-town economies created flows that extended further than today's car-based commuting patterns).

The facilitator connects to the broader toolkit: "The boundary proposals from the walking workshops show where the bioregion might be today. Your memories show where it was. The bioregion is not a fixed thing — it breathes, expands, contracts, changes. Understanding its temporal depth is essential to caring for its future."

Citizen Science Output

- The Memory Map (photographed at high resolution, with all notes and marks keyed to elder names and dates) → enters the Erdpuls archive as a primary document

- Audio recordings of thematic memories → transcribed and entered as "Landscape Memory Records"
- Specific elder observations that contradict or enrich the GIS layers → flagged for cross-reference (e.g., an elder remembers a spring that appears on no current map — this becomes a field investigation target)
- Historical map comparisons → documented as annotated three-epoch comparison panels

Token Economy Integration

Activity	Token Element
Contributing landscape memories	Reciprocity
Providing historical photographs or documents	Mutualism
Scribing and transcribing (younger participants)	Reciprocity
Identifying a feature on the Memory Map for field investigation	Mutualism + Regeneration
Returning for a seasonal repeat (different memories surface in different seasons)	Cooperation

Facilitator Notes

The Memory Map is irreplaceable. Every elder who participates adds information that exists nowhere else. The urgency of this work cannot be overstated — the Müllrose residents who remember the pre-war landscape are in their 80s and 90s. Within a decade, this knowledge will be gone unless it is recorded.

Do not correct elder memories. If an elder says "the stream used to flow here" and the historical map shows no stream in that location, record both. The elder may be remembering a drainage ditch, a seasonal flow, or a feature that predates the map. The tension between memory and cartography is itself data.

Allow grief. Elders mapping landscape change are often mapping loss — lost fields, lost forests, lost communities, lost youth. The facilitator should hold space for this without redirecting. The Memory Map is an act of honoring as well as recording.

Proxemic Design Notes

The Erzählcafé as proxemic infrastructure. The continuous provision of warm beverages and Kuchen is not hospitality — it is the proxemic environment that enables elder knowledge to flow. The spatial arrangement (circular seating, shared table, maps spread at touching distance, food and drink at hand) creates a strongly sociopetal personal-distance setting. All channels are active: warmth of the cup, smell

of coffee, taste of cake, sight of maps and faces, sound of conversation. This is the proxemic register in which elders' deepest landscape memories surface — not in response to formal questioning at social distance, but in the associative flow of Kaffeeklatsch.

The Memory Map as proxemic object. The large-format blank paper at the center of the group should be positioned so that all participants can reach it, lean over it, point to specific locations, and place colored marks. This haptic engagement with the map keeps the exercise at personal/intimate distance. If the Memory Map is projected on a wall or displayed behind glass, it becomes a public-distance object and loses the embodied quality that makes elder testimony spatially grounded. Younger scribes should sit alongside elders, not across a table, and write notes while leaning over the same map — sharing the proxemic field.

The temporal bioregion as proxemic expansion and contraction. When elders describe their lived bioregion over time, they often reveal a paradox: the elder's *proxemic* bioregion (the territory they knew at intimate distance — every field, every path, every stream within walking range) was often smaller but *deeper* than today's car-based commuting range. They knew fewer square kilometers, but they knew them with all five senses. Today's adults cover more territory but at public distance (through windshields, on highways). The temporal bioregion discussion is therefore also a discussion about proxemic loss — the trade-off between spatial extent and sensory depth.

Guide 4: Kartografien der Zugehörigkeit — Cartographies of Belonging

For Artists and Researchers (Residency-Depth Immersion)

Overview

Title	Kartografien der Zugehörigkeit / Cartographies of Belonging / Kartografie przynależności
Target Group	Artists-in-residence, visiting researchers, citizen science fellows
Group Size	1–6
Duration	Initial session: full day (7–8 hours including extended transect). Ongoing: weekly transects throughout the residency (1–4 weeks).
Location	Full landscape surrounding Erdpuls; the resident defines their own mapping territory
Season	Any; the seasonal arc experienced during the residency becomes a temporal dimension of the map
4A-Pathway Focus	Full pathway, with deepest engagement at Action (the production of an original cartographic work that extends bioregional knowledge)

The Residency Context

For an artist or researcher spending weeks on-site, the bioregion is not an abstraction to be explored in a day — it is the territory they inhabit. Their daily movements, walks, and explorations constitute an ongoing mapping practice whether they frame it that way or not. This guide provides a structure that transforms this natural inhabitation into rigorous bioregional documentation and creative cartography.

The guide operates on three levels simultaneously: - **Scientific:** the resident contributes to the cumulative bioregion-definition dataset through documented transects, GPS tracks, and transition observations - **Artistic:** the resident develops an original cartographic practice — a way of mapping that is shaped by their discipline and sensibility - **Phenomenological:** the resident practices a deepening perception of territory, moving from first impression through structural understanding to felt belonging

Initial Session: The First Transect (Full Day)

Morning — The Long Walk (4–5 hours):

The facilitator walks with the resident on a single extended transect — the longest in the toolkit, 8–15 km, chosen to cross the most dramatic landscape transitions available from the campus. In the Müllrose context, the ideal transect runs from the campus northward through agricultural land into the Schlaubetal gorge, and returns via a different route.

This is not a hike. It is a reading — a slow, attentive traversal of landscape. Every 500 m, a stop for documentation. At every transition, an extended pause: photograph, soil observation, sound recording, GPS point, written notes.

The facilitator's role is to model the bioregional reading: "Notice how the sand changes here? We've crossed from the outwash plain onto the moraine. The trees are different — pine on the sand, beech on the moraine. The water is flowing toward us now instead of away from us — we crossed a drainage divide. Feel the air temperature — it dropped two degrees when we entered the valley."

The resident records in their own medium: notebook, sketchbook, camera, recorder, specimen collection — whatever serves their practice.

Afternoon — The Map as Starting Question (2–3 hours):

Return to the campus. The facilitator introduces the full GIS project and the analog mapping materials. The resident explores both.

The key difference from other guides: the resident is not asked to produce a boundary proposal on Day 1. Instead, they are asked to formulate a **cartographic question** — a question that their residency-long mapping practice will investigate:

Examples of cartographic questions previous residents might pose: - "Where does the sound of the Schlaube reach — and does the acoustic bioregion match the hydrological one?" - "Can I map the bioregion using only plant pigments gathered from within it — creating a map that is literally made of its territory?" - "If I walk the proposed bioregional boundary and photograph every 100 meters, what portrait of the edge emerges?" - "How do the Erdpuls sensor readings change as I move away from the campus — and at what distance do they cease to be relevant?" - "What does the bioregion look like from the perspective of a single species — a stork, a bee, a mycorrhizal network?"

Proxemic note — the cartographic question as proxemic experiment: Every map is made from a specific proxemic position. A satellite image maps from orbital distance — public distance squared, vision-only. A soil sample maps from intimate distance — touch, smell, sight, all channels. The resident's cartographic question can be understood as a question about *which proxemic position to map from.* "Where does the sound of the Schlaube reach?" maps an acoustic boundary — a proxemic boundary defined by the auditory channel. "Can I map using only gathered pigments?" maps at intimate distance — every data point requires physical contact with the territory. The most creative cartographic questions

often involve mapping boundaries that are defined by non-visual proxemic channels: haptic boundaries (where does the soil texture change?), olfactory boundaries (where does the forest smell reach?), acoustic boundaries (where does the stream become inaudible?). These non-coincident sensory boundaries, mapped as separate lines, reveal that the bioregion has multiple edges — one for each proxemic channel.

The cartographic question becomes the framework for the resident's ongoing mapping practice.

The Ongoing Practice: Weekly Transects

Each week, the resident walks a different transect route — chosen to extend coverage of the bioregion from a different direction or at a different scale. Over a four-week residency, four transects in four directions produce a radial portrait of the territory.

Transect Protocol (adapted for residency depth):

The resident's transects go beyond the standard documentation table. They include: - Full GPS track with waypoints at every transition - Soil sample collection at key transitions (archived, labeled, for future comparison) - Macro photography series at each transition (same framing method: one horizon shot, one ground-level shot, one detail shot) - Sound recording at each stop (60 seconds minimum — creates an audio transect) - A drawing or painting at the turnaround point (the landscape portrait from the farthest point, the "view back" toward the unseen campus) - Application of the specific cartographic question: whatever the resident's research/artistic lens reveals

Mid-Residency Synthesis

Halfway through the residency, the facilitator meets with the resident for a synthesis session (2–3 hours): - All GPS tracks overlaid in QGIS - All transition photographs reviewed - The cartographic question revisited: "What has it revealed so far? What has it missed? Does it need to be refined?" - Comparison with the elder Memory Map (Guide 3 data, if available): "Do your observations align with elder memories of the same locations?" - Planning the remaining transects to fill gaps in coverage

End-of-Residency Output

The resident produces: 1. **A scientific contribution:** Full transect dataset (GPS tracks, transition observations, photographs, soil samples, sound recordings) entered into the Erdpuls bioregion database 2. **A creative/research contribution:** An original cartographic work shaped by the resident's discipline and cartographic question. This might be a drawing, a sound map, a photographic series, an essay, a pigment map, a specimen collection, a sculptural model of the terrain, a film, a data visualization, or a hybrid form that has no precedent. 3. **A boundary proposal:** Based on their accumulated transect experience, the resident proposes a bioregional boundary — not as a final answer but as a personal synthesis. This proposal joins the collection of proposals from all target groups.

The combination of scientific rigor and creative freedom is the signature of the residency approach. The bioregion is simultaneously measured and imagined, documented and interpreted.

Token Economy Integration

Activity	Token Element
Walking and documenting weekly transects	Cooperation + Mutualism
Contributing GPS and transition data to the database	Mutualism
Producing an original cartographic work	Mutualism + Regeneration
Presenting findings at an open studio or public event	Reciprocity
Teaching the transect method to another participant or group	Reciprocity
Collecting and archiving soil samples	Mutualism

Facilitator Notes

The first transect together matters. Walking the landscape with the resident — for a full day, in sustained attentive silence punctuated by shared observation — establishes the relationship between facilitator and resident, and models the quality of attention the practice requires. Do not abbreviate this.

The cartographic question is the rudder. Without it, the residency's mapping practice risks becoming a data-collection exercise without creative direction. With it, every transect becomes an investigation, every transition a clue. Spend real time helping the resident formulate a question that is genuinely their own.

Let the territory lead. Some residents will discover mid-residency that their cartographic question was the wrong one — the landscape is showing them something they didn't expect. This is not a failure but a success. The Goethean principle applies: the phenomenon speaks if the observer learns to listen.

Proxemic Design Notes

The first transect together as proxemic calibration. Walking 8–15 km with the resident — in sustained attentive silence punctuated by shared observation — is the most important proxemic event of the residency. Two people walking side by side at personal distance through a landscape for 4–5 hours develop a shared sensory vocabulary: both feel the same temperature shift at the forest edge, both smell the same change in the air at the stream, both notice the same underfoot transition from sand to clay. The facilitator's bioregional reading is modeled proximally — not taught from a lectern but shared at walking distance. This shared proxemic experience is the foundation for the resident's subsequent solo practice: they have been shown what it means to read landscape at intimate distance, and they carry this calibration forward.

The sound recording as proxemic data. The 60-second sound recordings at each transect stop are proxemic documents: they capture the acoustic environment at a specific location and proxemic distance (ground level, standing height, facing a specific direction). Over a four-week residency with four transects, the accumulated sound recordings create an acoustic proxemic map of the territory — revealing which zones are loud (roads, machinery, wind turbines), which are quiet (deep forest, sheltered valleys), and where acoustic transitions mark landscape boundaries that visual mapping misses.

The "view back" drawing as proxemic orientation. The drawing or painting at each turnaround point — looking back toward the unseen campus — is a proxemic orientation exercise. The resident paints from the farthest proxemic distance they have walked, looking toward the intimate center (the campus, the soil patch, the garden) that is now invisible. The tension between the intimate knowledge of the center and the public-distance view from the edge is the spatial experience of bioregional belonging: the territory is defined by the relationship between the close-known and the far-seen.

Guide 5: Eine Landschaft, Zwei Länder — One Landscape, Two Countries

For Cross-Border Groups (DE/PL Trilingual, Intercultural)

Overview

Title	Eine Landschaft, Zwei Länder / One Landscape, Two Countries / Jeden Krajobraz, Dwa Kraje
Target Group	Mixed German-Polish groups, cross-border community events, European exchange programs
Group Size	12–24 (balanced German and Polish participants)
Duration	Two days (Day 1: transects on both sides; Day 2: mapping synthesis) or a long single day
Location	Day 1: Walking transects from Erdpuls campus AND from a partner site in Lubuskie. Day 2: Zone E for mapping synthesis.
Season	Late spring or early autumn (comfortable walking conditions, maximum landscape legibility, agricultural activity visible)
4A-Pathway Focus	Full pathway; emphasis on Acknowledgment (the bioregion does not recognize the border) and Action (designing cross-border bioregional stewardship)

The Cross-Border Principle

This is the most ambitious guide in the entire bioregion mapping series. It asks participants from two countries to collectively define a territory that their governments do not recognize and their maps do not show: the cross-border bioregion of the Müllrose-Słubice-Rzepin area.

The geological fact is unambiguous: the glacial landscape that defines the Erdpuls campus extends without interruption into Poland. The moraine ridges, the outwash sands, the river systems (Schlaube → Oder / Odra), the vegetation communities — all cross the border. The Oder itself, which forms the political boundary, is a connector, not a divider: it is the central hydrological feature of a single watershed.

The political fact is equally unambiguous: the border is real, consequential, and historically charged. Environmental regulations, land use planning, language, currency, and institutional structures differ on each side. A bioregion that ignores the border is ecologically honest but administratively fictional.

The workshop holds both facts simultaneously: the bioregion exists, the border exists, and the creative tension between them is the most productive space for cross-border sustainability literacy.

Preparation and Materials

Everything from the adult guide (Guide 2), plus: - Large-format maps covering BOTH sides of the border (topographic and satellite, A0 if possible — the standard A1 may not be large enough for the full cross-border area) - GIS data layers for both the German and Polish sides (Polish geodata available from Geoportal.gov.pl; geological data from PIG-PIB) - A comparison table: "Same landscape, different systems" — a printed A3 sheet showing how the same ecological features are named, managed, and protected differently on each side (e.g., the same Natura 2000 site may have different management plans in DE and PL) - Bilingual transect documentation forms - Transport for cross-border transect (bus, car convoy, or — ideally — bicycle) - Co-facilitation team (DE + PL) - Shared meal provisions from both sides

Day 1: The Cross-Border Transect

The ideal transect runs from the Erdpuls campus eastward, crosses the German countryside, reaches the Oder, crosses into Poland (via bridge at Kunowice/Frankfurt-Słubice or ferry if available), and continues into the Polish landscape for several kilometers before turning back. Total distance: 15–25 km if walked fully, or driven with walking segments at key transitions.

If a full cross-border walk is not feasible, the alternative is two parallel transects: a German-side team walks east from the campus for 5–8 km; a Polish-side team walks west from a partner location for 5–8 km. Both teams document identically. They meet at or near the border.

The Border Moment:

However the transect is organized, the moment of crossing the border (or meeting at it) is marked explicitly:

Proxemic note — the border as proxemic rupture: The Border Moment is the workshop's most dramatic proxemic event. On the German side, participants walked through familiar landscape at personal distance — they could read the signs, understand overheard conversation, recognize the style of buildings, name the crops. Crossing the border produces a proxemic rupture: signs become foreign, language opaque, building styles unfamiliar. The same physical landscape — the same glacial sand, the same forest, the same sky — suddenly feels further away. The participant has been pushed from personal to social or public proxemic distance with the landscape, not because the landscape changed but because the cultural codes that mediated their intimate relationship with it have changed. What follows — the instruction to dig soil on both sides and compare — is a proxemic recovery: the hands reach down into

the earth and find the same texture, the same color, the same smell. The soil's intimate-distance information (tactile, olfactory, thermal) has not changed. The border is real at social distance (signs, language, institutions) but irrelevant at intimate distance (soil, smell, organisms).

"Stop here. Look east. Look west. What has changed? The language on the signs. The road surface. The building style. Perhaps the field pattern. Now look down. Has the soil changed? Dig a handful on each side. Compare. Has the geology changed? Look at the horizon. Has the vegetation changed?"

Typically: very little has changed ecologically. The soil is the same glacial sand. The vegetation is the same mixed forest and agriculture. The birds are the same species. The water flows in the same direction.

"The border is 80 years old. The landscape is 15,000 years old. The landscape does not know about the border."

Day 2: Cross-Border Mapping Synthesis

Back at Zone E. The full Appendix C mapping protocol, extended to cross-border scale.

The Critical GIS Exercise:

Display the QGIS project with layers from both countries.

"Watch what happens when I toggle the administrative boundaries layer on and off."

With the layer on: two countries, two colors, a hard line. With the layer off: one landscape, one geology, one watershed, one vegetation community.

Toggle repeatedly. The visual impact is powerful and requires no explanation.

Proxemic note — the GIS toggle as proxemic revelation: The administrative boundary layer creates a visual proxemic barrier on the screen — two colors, two countries, a hard line that the eye reads as division. Toggling it off reveals the continuous landscape beneath — the proxemic equivalent of closing your eyes and relying on non-visual channels (which, as the soil comparison showed, detect no border). The facilitator can make this explicit: "When the boundary layer is on, you see two countries. That's the view from public proxemic distance — political, administrative, visual-only. When the layer is off, you see one landscape. That's what your hands told you at the border this morning, at intimate distance. Both are real. The question is which one you build your stewardship around."

Watershed Mapping Across the Border:

The most important layer. The Oder watershed boundary — the line beyond which rainfall flows toward the Oder — runs on both sides of the river, deep into both countries. The Schlaube, flowing into the Oder from the west, and Polish tributaries flowing in from the east, are part of the same hydrological system.

"If you define the bioregion by its watershed — by the water that connects it — then the bioregion of Müllrose extends at least 30 km into Poland. Does your political identity accept that? Does it have to?"

Cross-Border Boundary Deliberation:

The culminating exercise. Two colors of string: one proposed by German participants, one by Polish participants. Do they agree? Where they diverge, the reasons are discussed. The final composite boundary proposal is drawn on the cross-border map and annotated bilingually.

Proxemic note: This is the most complex sociopetal negotiation in the entire toolkit. German and Polish participants stand around the same map at personal distance, reaching across each other's space, laying string, translating, debating. The map must be large enough (A0 recommended) and low enough that everyone can reach — the cross-border boundary deliberation only works when both nationalities are leaning over the same surface, their hands in the same proxemic field, their string-proposals crossing and overlapping. If participants cluster by nationality on opposite sides of the table, gently redistribute them. The boundary must be negotiated from a shared proxemic position — side by side — not from opposed positions facing each other across a table.

The Comparison Table Discussion:

Using the prepared "Same landscape, different systems" table:

Feature	German side	Polish side
Protected area designation	Naturpark Schlaubetal	Park Krajobrazowy (if applicable)
Soil management	EU CAP cross-compliance	EU CAP cross-compliance (same)
Water quality monitoring	LAWA framework	WIOŚ framework
Species observation platform	iNaturalist / NABU	iNaturalist / OTOP
Citizen science tradition	Established (NABU, senseBox)	Growing (Otwarta Nauka)
Community mapping tradition	Limited	Growing (OpenStreetMap Poland is very active)

"The same landscape, managed by two systems. Where could they cooperate? Where do the different systems create gaps? And where does a cross-border citizen science network — like the one you're building today — fill those gaps?"

Citizen Science Output

This guide produces the most geographically ambitious citizen science output in the toolkit: - Cross-border transect data (GPS tracks, transitions, photographs) from both countries → entered into the Erdpuls GIS project as the first cross-border bioregion dataset - A proposed cross-border bioregional boundary → digitized and published (with attribution to the group) - Bilingual transition names and landscape descriptions → entered into the pattern language as cross-border patterns - If permanent, a pilot for a cross-border citizen science monitoring network

Token Economy Integration

Activity	Token Element
Walking the cross-border transect	Cooperation
Documenting transitions in both countries	Mutualism
Translating during the synthesis session	Reciprocity
Contributing to the cross-border boundary proposal	Cooperation + Mutualism
Establishing contact with a partner institution on the other side	Reciprocity + Regeneration
Contributing cross-border data to a shared platform	Mutualism + Regeneration

Facilitator Notes

Logistics are complex. Cross-border transects require passports/IDs, local permissions for walking on agricultural land (especially on the Polish side), transport coordination, and bilingual communication throughout. Plan at least a month in advance. A Polish co-facilitator or partner organization is essential — do not attempt this as a German-only initiative inviting Polish participants.

The emotional weight of the border. For older participants on both sides, the Oder-Neisse line carries the weight of 1945 — displacement, loss, new beginnings, historical injustice. The workshop's "the landscape doesn't know about the border" framing should not minimize this history. The facilitator acknowledges: "The border is not meaningless. But the landscape is older than the border, and it connects what the border divides. Today we attend to both realities."

The asymmetry. Germany is wealthier than Poland. The workshop is hosted on the German side. This creates an implicit power dynamic. Counter it actively: ensure Polish participants lead at least one mapping phase; use Polish place-names alongside German ones; serve Polish food alongside German food; travel TO Poland rather than expecting Polish participants to come to you.

Proxemic Design Notes

The cross-border transect as proxemic recovery. Walking from the German side into Poland, the participant experiences a proxemic rupture (unfamiliar signs, language, styles push them to social/public distance). Continuing to walk produces a gradual proxemic recovery: sounds, smells, and textures become recognizable again; the landscape reasserts its intimate-distance familiarity despite the cultural foreignness. The walking itself is the recovery mechanism — the body, moving through territory at intimate distance, accumulates enough sensory evidence to override the cultural rupture. At some point, the participant realizes: "The soil is the same under my feet. The birdsong is the same. The forest smells the same." The proxemic distance has closed again — public → social → personal — and the participant knows, through their body, that the border is a cultural fact but not an ecological one.

The shared meal as proxemic center of the two-day program. As in the other cross-border guides, the shared meal is the moment where the workshop's proxemic and conceptual principles converge. Food from both sides, at personal-to-intimate distance, all channels active. The meal should be positioned between Day 1 (the transect, which produced proxemic rupture and recovery) and Day 2 (the synthesis, which requires collaborative negotiation). The meal metabolizes the transect experience and prepares the body for the sociopetal work of mapping synthesis.

The "Same landscape, different systems" table as proxemic critique. The comparison table shows that the same ecological features are managed by different institutional systems on each side. These management systems operate at administrative distance — social/public distance, formalized, institutional. The bioregion they manage operates at intimate/personal distance — soil, water, organisms, sensory encounter. The table reveals the proxemic gap between governance and territory: governance operates from the farthest proxemic remove (policy documents, regulatory frameworks), while the territory it governs is most fully known at the closest proxemic distance (hands in soil, feet in stream, nose in forest air). Cross-border citizen science — the toolkit's proposal — bridges this gap by generating intimate-distance data that informs public-distance governance.

Cross-Guide Reference: The Bioregion Emerges from Many Eyes

The five guides, conducted across seasons and years, produce a cumulative bioregion-definition dataset that no single workshop could achieve:

- **Children** provide fresh perception of transitions — they see what adults have stopped noticing
- **Adults** provide practical landscape literacy and connect the bioregion to daily life
- **Elders** provide temporal depth — the bioregion across decades, a living chronosequence
- **Artists and Researchers** provide creative rigor — original cartographic methods that reveal what standard mapping misses

- **Cross-Border groups** provide spatial completeness — the bioregion as it actually exists, across the political boundary

The composite map — built from dozens of transects, hundreds of transition observations, multiple boundary proposals, elder memories, artistic interpretations, and cross-border data — is not a fixed document. It is a living cartography, updated seasonally, contested productively, and deepening annually. It is the spatial foundation of the pattern language: the territory within which every pattern makes sense.

The proxemic depth of the composite map: Each target group contributes a different proxemic layer to the bioregion definition. Children contribute the Sensory Closure pattern — the boundary where non-visual channels fade, defining felt belonging through bodily proximity. Adults contribute the Turnaround Moment — the proxemic inventory at the farthest point, defining the edge where embodied connection gives way to intellectual knowledge. Elders contribute the temporal proxemic field — memories that carry intimate-distance sensory information across decades, revealing how the bioregion's proxemic geography has expanded and contracted over time. Artists contribute non-visual boundary maps — acoustic, olfactory, haptic, thermal boundaries that don't coincide with visual ones, revealing that the bioregion has as many edges as it has sensory channels. Cross-border groups contribute the proxemic rupture and recovery — the discovery that the border is real at social distance but irrelevant at intimate distance, and that walking through territory at close range dissolves what administrative maps divide. The composite map, built from all these proxemic layers, is not just a map of territory but a map of *how territory is known at every distance*.

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