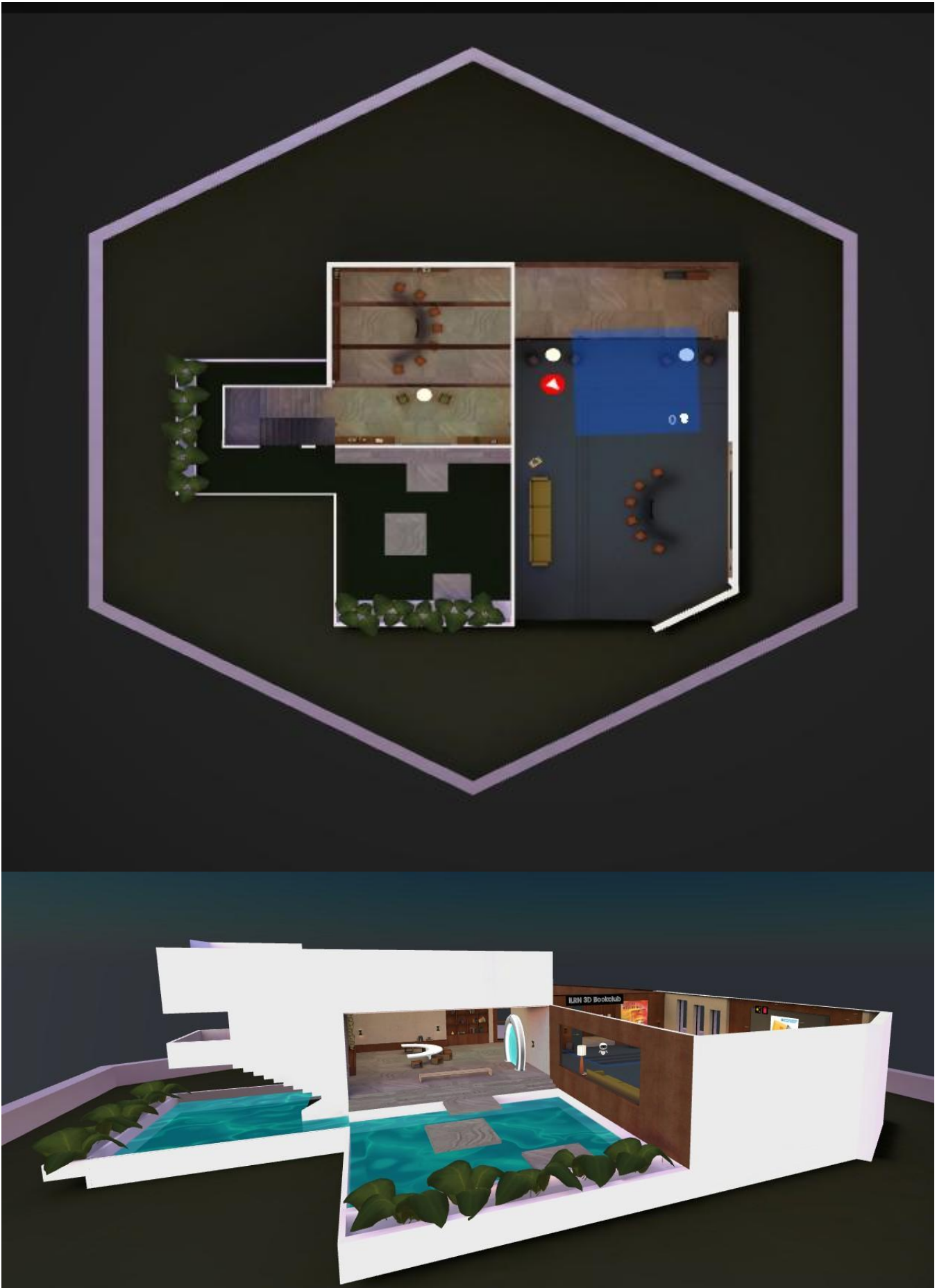


(4) Branch/House/Track #4:
Inclusion, Diversity, Equity,
Access, & Social Justice
(IDEAS)



The current House 4 frame includes a gallery and a home-like atmosphere for presentations or events (shown above). As of January 29, 2026, it has not been

decorated or assigned to host regular activities.

BH-05 Science, Technology, Engineering & Mathematics (STEM)

| | | | |
|-----------------------|---|-----------------|-------------|
| Frame Type | Branch House | Status | OPEN |
| Track / Branch | STEM Education | Capacity | 50 users |
| FrameVR URL | https://framevr.io/house5-stem | | |

Frame Purpose

The disciplinary home for immersive learning research and practice in STEM fields. STEM is the most heavily published domain in XR education research — this Frame surfaces and organises that evidence base while connecting it to the broader iLRN ecosystem.

Frame type context: Branch House — persistent disciplinary anchor. Note that current literature skews heavily toward STEM; this Frame curators should actively surface non-STEM connections and resist silo effects.

1 Ownership & Governance

| | |
|-------------------------------|--|
| Frame Lead / Owner | |
| Content Contributors | |
| Technical Steward | |
| Accessibility Reviewer | |
| Last Updated | |

2 Learning Design Requirements — + UDL 3.0

: expert/novice distinction is acutely relevant in STEM: prior knowledge gaps between participants can be large. The Frame must support both introductory and advanced engagement without either overwhelming newcomers or boring domain experts.

UDL: XR offers powerful Representation options for abstract STEM concepts (molecular structures, mathematical spaces, physics simulations). The Frame should model this — not just talk about it. At least one board should demonstrate an immersive representation of a STEM concept.

| | Universal Requirements (all frames) | Criterion / Pass Threshold |
|--------------------------|--|---|
| <input type="checkbox"/> | Purpose statement posted in Frame at entry zone | <i>Visible within 10 sec of entering</i> |
| <input type="checkbox"/> | Orientation cues for newcomers (what this space is, what to do) | <i>Confirmed by blind test with volunteer</i> |
| <input type="checkbox"/> | Asynchronous contribution pathway available (forum, Codex, Discord link) | <i>At least 1 async pathway; URL live</i> |
| <input type="checkbox"/> | Content accessible in text form via Codex (Representation — UDL) | <i>Codex page live and linked in Frame</i> |
| <input type="checkbox"/> | No colour-only navigation cues — all zones/portals have text labels | <i>Confirmed by reviewer</i> |
| <input type="checkbox"/> | Emotional tone is welcoming; language is jargon-free at entry | <i>Confirmed by reviewer external to Frame team</i> |
| | Frame-Specific Requirements | Criterion / Pass Threshold |
| <input type="checkbox"/> | At least one board demonstrates an immersive/XR representation of a STEM concept (not just text description) | <i>Content confirmed with branch contributor</i> |
| <input type="checkbox"/> | Non-STEM connections signposted (counter-silo measure) | <i>At least 1 cross-branch link present</i> |

3 Design & Build Checklist

| | Layout & Purpose | Criterion / Pass Threshold |
|--------------------------|---|--|
| <input type="checkbox"/> | Frame purpose defined in one sentence, posted at entry | <i>Written purpose statement visible</i> |
| <input type="checkbox"/> | Environment size matches use case | <i>Appropriate environment selected; not over/undersized</i> |
| <input type="checkbox"/> | Central meeting / focal area identifiable within 10–15 sec | <i>Walk-through test by reviewer</i> |
| | Navigation | Criterion / Pass Threshold |
| <input type="checkbox"/> | Minimum 2 outgoing portal links to other Frames | <i>≥ 2 portals; 0 dead ends</i> |
| <input type="checkbox"/> | Consistent portal visual language (campus-wide asset style) | <i>Matches campus portal standard</i> |
| <input type="checkbox"/> | Navigation path from entry to any key area ≤ 15 seconds | <i>Timed walk-through by reviewer</i> |
| <input type="checkbox"/> | All portal destinations confirmed live | <i>Click-tested by reviewer</i> |

| | Signage | Criterion / Pass Threshold |
|--------------------------|--|---|
| <input type="checkbox"/> | All text legible on mobile screen at default eye level without zooming | Phone screen test |
| <input type="checkbox"/> | No signage relies on colour alone | Label or icon accompanies all colour-coded elements |
| | Zone Setup (if zones are used) | Criterion / Pass Threshold |
| <input type="checkbox"/> | 'Restrict all assets to zones' enabled if zones are in use | Frame settings → restrict assets = ON |
| <input type="checkbox"/> | Each zone has a named purpose | Zone names visible in Frame settings |

4 Performance & Asset Budget — check via Frame Settings → Performance Rating or ?debug=true

FrameVR targets: ≤ 200 draw calls · ≤ 130,000 active faces · ≤ 20 materials. FPS target: 60 desktop, ≥ 40 minimum desktop, ≥ 30 iOS Safari.

| | Performance Monitor Readings | Criterion / Pass Threshold |
|--------------------------|---|---|
| <input type="checkbox"/> | FPS ≥ 40 on desktop (Chrome/Edge) | Target 60; below 40 = must fix |
| <input type="checkbox"/> | FPS ≥ 30 on iOS Safari mobile | Must pass before launch |
| <input type="checkbox"/> | Draw call count ≤ 200 | Babylon Inspector → Stats |
| <input type="checkbox"/> | Active face/poly count ≤ 130,000 | Babylon Inspector → Stats |
| <input type="checkbox"/> | Material count ≤ 20 | Babylon Inspector → Stats |
| <input type="checkbox"/> | Performance Rating not flagged RED in Frame Settings | Yellow = caution; Red = block launch |
| | Asset Hygiene | Criterion / Pass Threshold |
| <input type="checkbox"/> | All images compressed before import (squosh.app) | No raw camera/screen captures |
| <input type="checkbox"/> | No Sketchfab model imported without poly-count review | Flagged models resolved or documented |
| <input type="checkbox"/> | Unused assets deleted (not just hidden) | Assets list contains only active assets 🚨 Check with the owner of the asset before deletion!! |
| | Media Settings | Criterion / Pass Threshold |
| <input type="checkbox"/> | All videos set to NOT autoplay | Each video asset → autoplay = OFF |
| <input type="checkbox"/> | Webcam/streaming screens disabled unless live event | Default OFF; enable only during live sessions |
| <input type="checkbox"/> | No Smoke particle effects in use | High GPU cost; zero tolerance |

| | | |
|--------------------------|----------------------------|--|
| <input type="checkbox"/> | Animated objects minimised | <i>Each loop adds ongoing GPU cost</i> |
|--------------------------|----------------------------|--|

| | |
|-----------------------|--|
| FPS Desktop | |
| FPS iOS Safari | |
| Draw Calls | |
| Poly Count | |
| Materials | |
| Perf. Rating | |

5 Content & Boards Checklist

| | Codex & Community Links | Criterion / Pass Threshold |
|--------------------------|--|--|
| <input type="checkbox"/> | Codex page URL embedded as board or link in Frame | <i>BookStack page URL live and linked</i> |
| <input type="checkbox"/> | Forum / InVision Community thread linked | <i>Thread URL confirmed live</i> |
| | Content Boards | Criterion / Pass Threshold |
| <input type="checkbox"/> | Image board(s) populated with track-relevant content | <i>At least 1 board with real content, not placeholder</i> |
| <input type="checkbox"/> | Upcoming events board posted and dated | <i>Event title + date visible; past events removed</i> |
| <input type="checkbox"/> | Showcase zone set up for presenter / author work | <i>Distinct area labelled Showcase or equivalent</i> |
| <input type="checkbox"/> | Presenter / author content loaded or linked | <i>Confirmed with content owner</i> |
| | Conference-Specific Elements | Criterion / Pass Threshold |
| <input type="checkbox"/> | Greek cultural / scavenger hunt artifact placed (if assigned) | <i>Confirm with George / Greek team</i> |
| <input type="checkbox"/> | Quest clue placed correctly (if this Frame is a quest stop) | <i>Cross-check against quest master list</i> |
| <input type="checkbox"/> | Tally.so submission form linked (if track accepts submissions) | <i>Tally form URL confirmed and tested</i> |

6 Planned Activities & Events

| Activity / Event | Date | Owner | Status |
|-------------------------|-------------|--------------|---------------|
| | | | |

| | | | |
|--|--|--|--|
| | | | |
| | | | |
| | | | |

7 Connected Frames & Portals

| Destination Frame | Portal Type | Notes |
|---|------------------|---------------------------|
| iLRN Central (HUB-03) | Return portal | Primary inbound route |
| Assessment & Evaluation (BH-02) | Branch-to-Branch | STEM assessment methods |
| Nature & Environmental Sciences (BH-08) | Branch-to-Branch | Science education overlap |
| State of XR (HUB-01) | Branch-to-Hub | Large events |
| | | |
| | | |

8 Asset Inventory

| Asset Name / Description | Poly Count | File Size | Owner |
|--------------------------|------------|-----------|-------|
| | | | |
| | | | |
| | | | |
| | | | |

9 Accessibility Sign-Off — reviewer must complete this, not the Frame owner

| | Wayfinding & Legibility | Criterion / Pass Threshold |
|--------------------------|---|---|
| <input type="checkbox"/> | New user orients within 10 seconds without prior knowledge | Blind test with volunteer |
| <input type="checkbox"/> | All text boards legible on mobile at default eye level | Phone screen test |
| <input type="checkbox"/> | No element identified by colour or spatial position alone | Confirmed with audio OFF |
| | Inclusivity | Criterion / Pass Threshold |
| <input type="checkbox"/> | No flashing or strobing effects | Zero tolerance — photosensitivity risk |
| <input type="checkbox"/> | Critical content accessible from a stationary avatar position | No movement required to read key boards |

| | | |
|-------------------------------|--|---|
| <input type="checkbox"/> | Language on all boards is plain and welcoming to newcomers | <i>Reviewed by someone outside Frame team</i> |
| Device & Bandwidth | | Criterion / Pass Threshold |
| <input type="checkbox"/> | Fully usable on Chrome / Edge desktop | <i>Full navigation completed without crash</i> |
| <input type="checkbox"/> | Usable on iOS Safari mobile | <i>Full navigation completed without crash or major lag</i> |
| <input type="checkbox"/> | Loads within 30 sec on Slow 3G (Chrome DevTools → Network → Slow 3G) | <i>Slow 3G test completed and passed</i> |
| Sign-Off | | Criterion / Pass Threshold |
| <input type="checkbox"/> | Reviewer name and date recorded below | <i>Required before Frame status = Ready</i> |

| | |
|------------------------|--|
| Reviewed By | |
| Review Date | |
| Outcome | |
| Follow-Up Items | |

10 Codex Integration (BookStack)

| | |
|--------------------------------|--|
| Codex Book / Chapter | |
| Codex Page URL | |
| Last Synced | |
| Outstanding Codex Tasks | |

11 Additional Notes & Open Questions

Revision #1

Created 24 April 2026 09:10:13 by Charlene Hardin

Updated 24 April 2026 09:10:13 by Charlene Hardin