



EDspaces

Designing the Future of Education
Charlotte, NC | November 7-9, 2023

Through the Lens of Trauma Informed Design

November 8, 2023
2 - 3 PM



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Trauma Informed Design
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Presentation Outline

1

Understanding Trauma and Trauma Informed Design

- Defining Trauma and Why It Matters to Designers
- What is Trauma Informed Design and How to Practice it

2

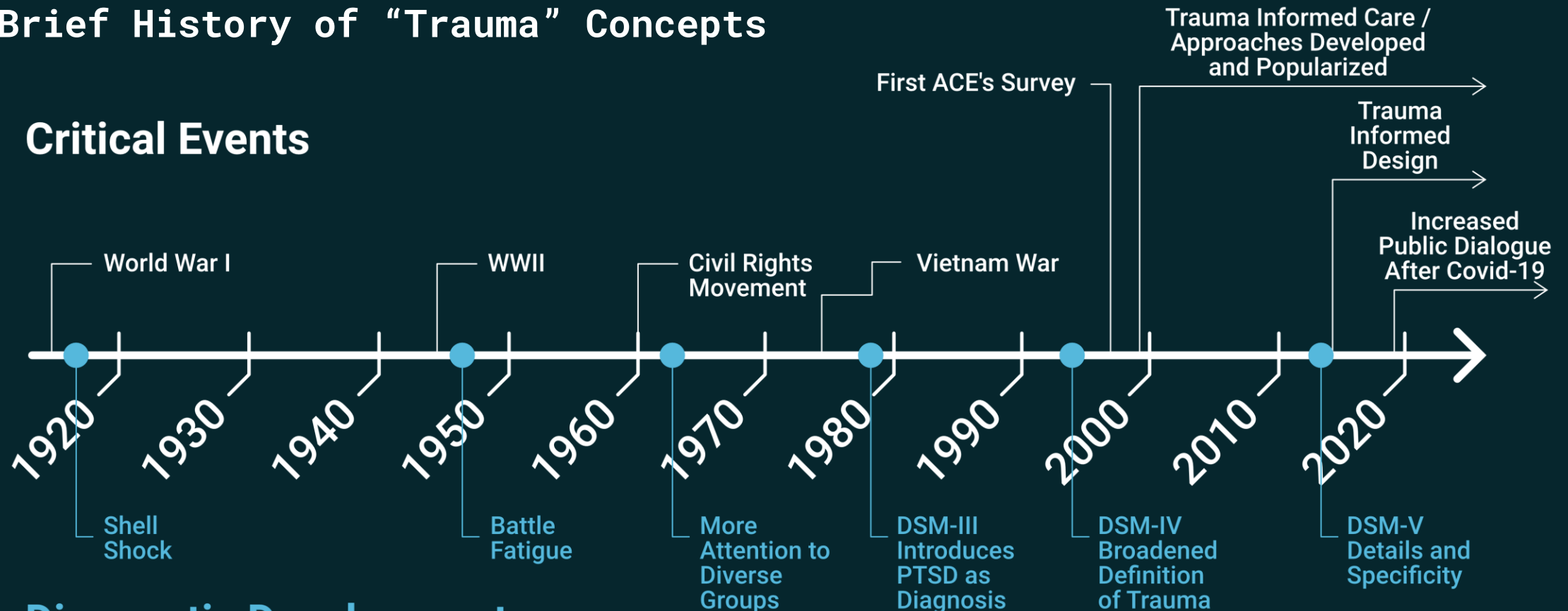
Applying a Trauma Informed Design Approach

- Rise Early Learning Case Study
- Bruce Vento Case Study
- Community Workshops



A Brief History of “Trauma” Concepts

Critical Events



Diagnostic Developments



Defining “Trauma” for Trauma-Informed Approaches

“Individual trauma results from an **event, series of events, or set of circumstances** that is **experienced** by an individual as physically or emotionally harmful or life threatening and that has **lasting adverse effects** on the individual’s functioning and mental, physical, social, emotional, or spiritual **well-being**”

- SAMHSA’s Concept of Trauma -

The Adverse Childhood Experience (ACE) Survey

- Questions Developed from a range of other Trauma Diagnostic survey tools
- Conducted through a CDC – Kaiser Partnership
- The first round of data collection acquired **9,508 responses** and this has grown to **over 17,000** in the years since from adult patients at a clinic in San Diego

More than 60% of the respondents reported at least one of the traumatic experiences on the survey

- This study found **strong correlation** between co-occurring Adverse Childhood Experiences and health risk factors / diseases

Felitti, V. J. et al., 1998. Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, 14(4), pp. 245-258.

National Center for Injury Prevention and Control, Division of Violence Prevention, 2021. *About the CDC-Kaiser ACE Study*. [Online]
Available at: <https://www.cdc.gov/violenceprevention/aces/about.html>
[Accessed 31 August 2022].

Common Categories of ACEs

1. Emotional / Psychological Abuse
2. Physical Abuse
3. Sexual Abuse
4. Parents in Abusive Relationship
5. Parents with Substance Abuse Problems
6. Household Member Depressed or Mentally Unwell
7. Household Member Went to Prison
8. Emotional Neglect*
9. Physical Neglect*
10. Divorced Parents*
11. Bullying*

**Added after the initial ACE study*

Felitti, V. J. et al., 1998. Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE) Study. American Journal of Preventive Medicine, 14(4), pp. 245-258.

Winninghoff, A., 2020. Trauma by Numbers: Warnings Against the Use of ACE Scores in Trauma-Informed Schools. Occasional Paper Series, 43(4).

Houtepen, L. C. et al., 2020. Associations of Adverse Childhood Experiences with Educational Attainment and Adolescent Health and the Role of Family and Socioeconomic Factors: A Prospective Cohort Study in the UK. PLOS Medicine, 17(3).

Results of the First ACE Study

Category	No Adverse Experiences	One	Two	Three	Four or More
Past Suicide Attempt	1.00	1.80	3.00	6.60	12.20
Injected Drug Use	1.00	1.30	3.80	7.10	10.30
Alcoholism	1.00	2.00	4.00	4.90	7.40
Illicit Drug Use	1.00	1.70	2.90	3.60	4.70
Depression	1.00	1.50	2.40	2.60	4.60
50+ Sexual Partners Over Lifetime	1.00	1.70	2.30	3.10	3.20
Had a Sexually Transmitted Disease	1.00	1.40	1.50	1.90	2.50
Current Smoker	1.00	1.10	1.50	2.00	2.20
Severe Obesity	1.00	1.10	1.40	1.40	1.60
Limited Physical Activity	1.00	1.20	1.20	1.40	1.30
Chronic Bronchitis / Emphysema	1.00	1.60	1.60	2.20	3.90
History of Hepatitis or Jaundice	1.00	1.10	1.80	1.60	2.40
Fair or Poor Self-Rated Health	1.00	1.20	1.40	1.40	2.20
Heart Disease	1.00	0.90	0.90	1.40	2.20
Cancer	1.00	1.20	1.20	1.00	1.90
Past Skeletal Fracture	1.00	1.10	1.40	1.20	1.60
Stroke	1.00	0.90	0.70	1.30	2.40
Diabetes	1.00	1.00	0.90	1.20	1.60

Expanded Results by Years of Additional Study

Domain of Dysfunction	No Adverse Experiences	One	Two	Three	Four
☐ Substance Abuse					
Injected Drug Use	1.00	2.30	4.50	5.30	11.10
Alcoholism	1.00	2.00	2.90	4.50	7.20
Illicit Drug Use	1.00	1.60	2.20	2.90	4.50
Smoking	1.00	1.10	1.30	1.60	1.80
☐ Mental Health Disturbances					
Depressed Affect	1.00	1.50	2.20	2.50	3.60
Panic Reactions	1.00	1.30	1.70	2.00	2.50
Hallucinations	1.00	1.10	1.60	2.00	2.70
Anxiety	1.00	1.20	1.70	1.80	2.40
☐ Sexuality					
Early Intercourse	1.00	2.10	2.70	3.70	6.60
Promiscuity (> 30 partners over lifetime)	1.00	1.30	1.90	2.50	3.60
Sexual Dissatisfaction	1.00	1.10	1.50	1.50	2.00
☐ Stress and Aggression					
Risk of Perpetrating Intimate Partner Violence	1.00	1.80	2.40	3.30	5.50
Difficulty Controlling Anger	1.00	1.40	2.20	2.30	4.00
High Level of Perceived Stress	1.00	1.20	1.40	1.50	2.20
☐ Somatic Health Disturbances					
Adjusted Odds Ratio	1.00	1.30	1.80	1.60	2.70
Sleep Disturbance	1.00	1.20	1.60	1.80	2.10
Severe Obesity	1.00	1.30	1.40	1.50	1.90
☐ Memory					
Memory Impairment	1.00	1.30	2.10	2.60	4.40

Expanded Results by Years of Additional Study

People with 4+ ACEs had an Adjusted Odds Ratio of 2 for having poor educational outcomes

The two ACEs with the greatest impact on educational outcomes were emotional neglect and bullying

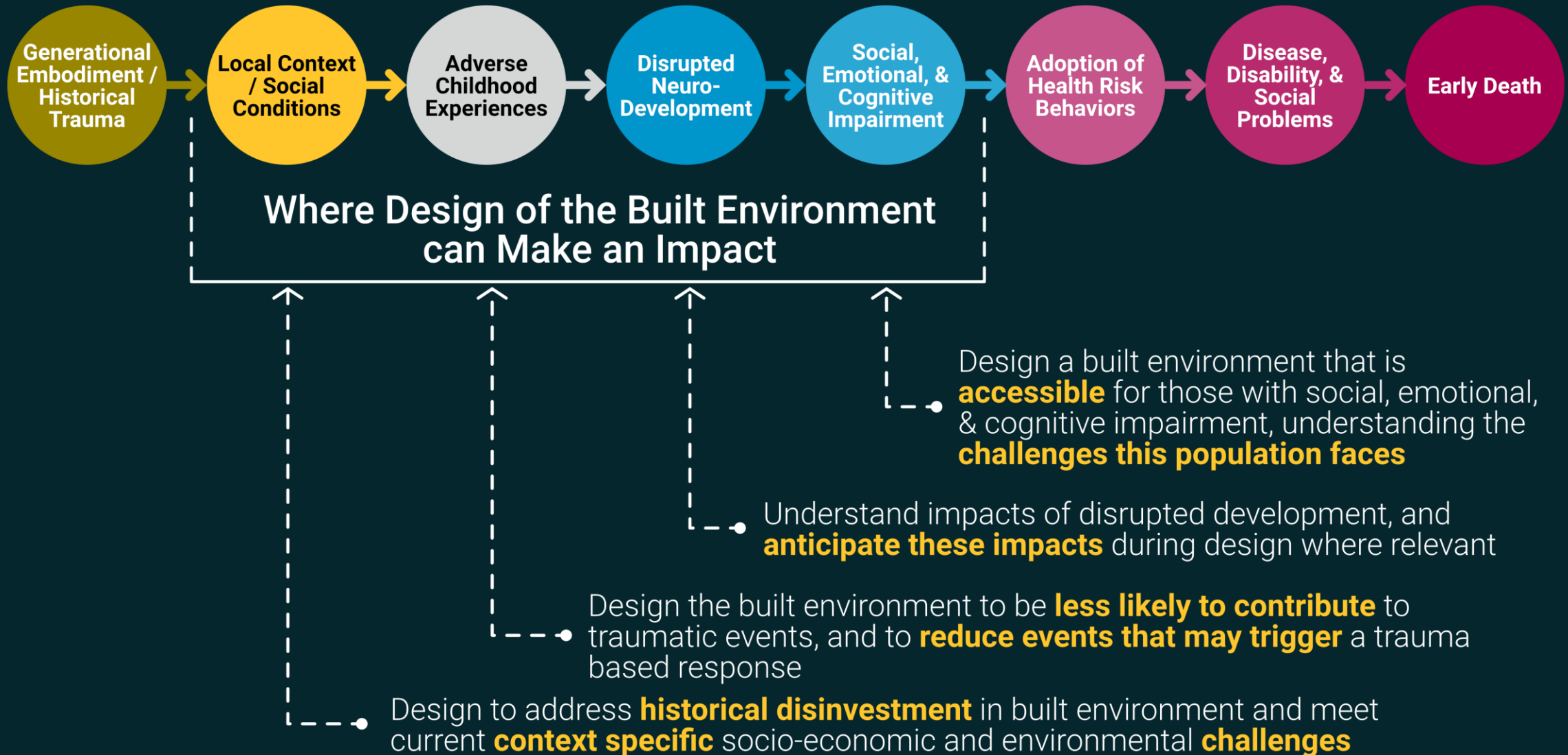
Category	No Adverse Experiences	One	Two	Three	Four
Absenteeism	1.00	1.30	1.40	1.80	2.40
Financial Problems	1.00	1.30	1.80	1.90	2.20
High School Non Completion	1.00	1.08	1.11	1.53	2.34
Household Poverty Status	1.00	1.05	1.57	1.25	1.56
Job Problems	1.00	1.20	1.50	1.80	2.40
Unemployment	1.00	1.25	1.35	2.39	2.31

Houtepen, L. C. et al., 2020. Associations of Adverse Childhood Experiences with Educational Attainment and Adolescent Health and the Role of Family and Socioeconomic Factors: A Prospective Cohort Study in the UK. PLOS Medicine, 17(3).

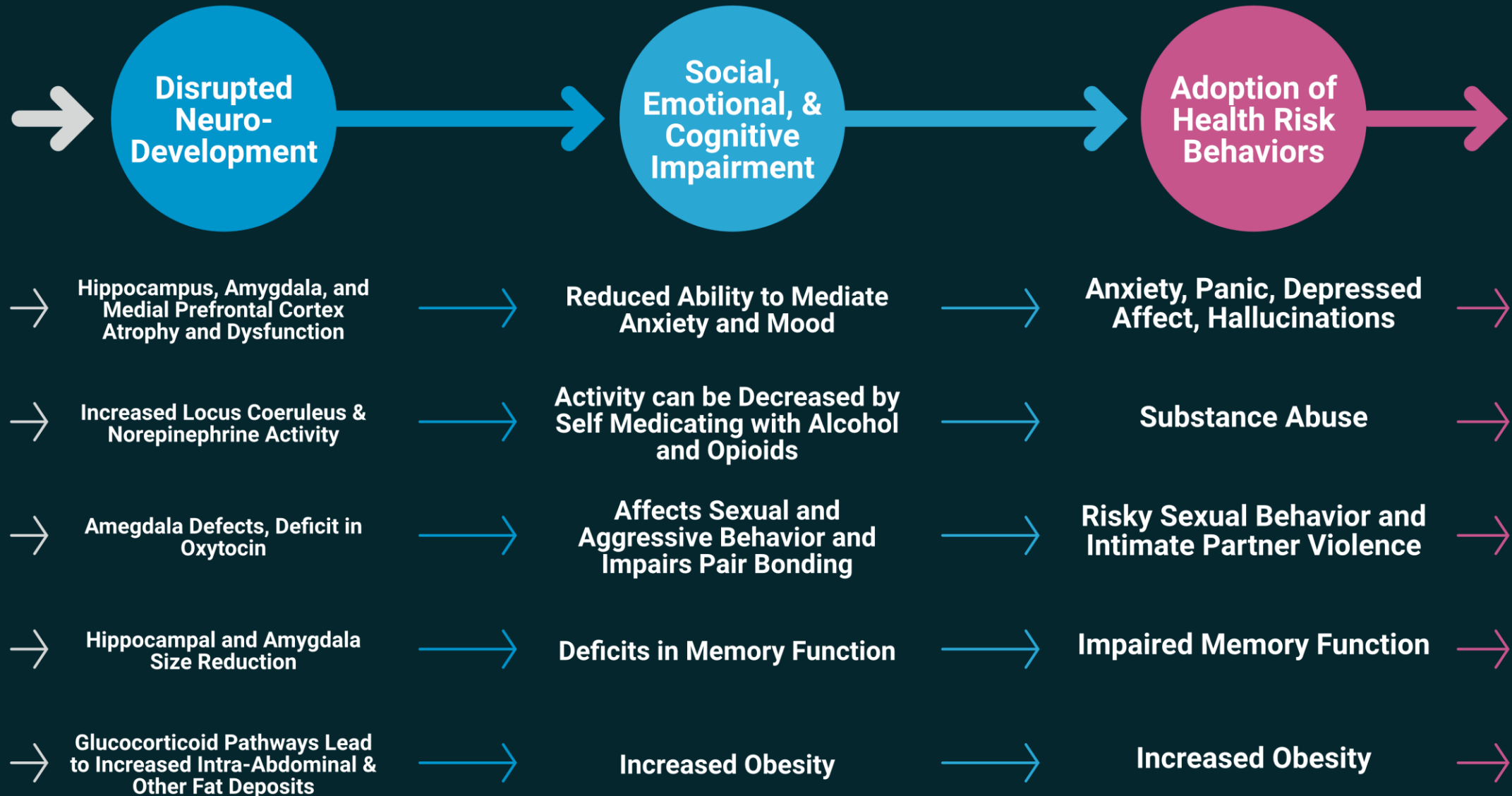
Metzler, M. et al., 2017. Adverse Childhood Experiences and Life Opportunities: Shifting the Narrative. Children and Youth Services Review, Volume 72, pp. 141-149.

Anda, R. F. et al., 2004. Childhood Abuse, Household Dysfunction, and Indicators of Impaired Adult Worker Performance. The Permanente Journal, 8(1), pp. 30-38.

Tracing Causation - from ACEs to Negative Outcomes to Early Death

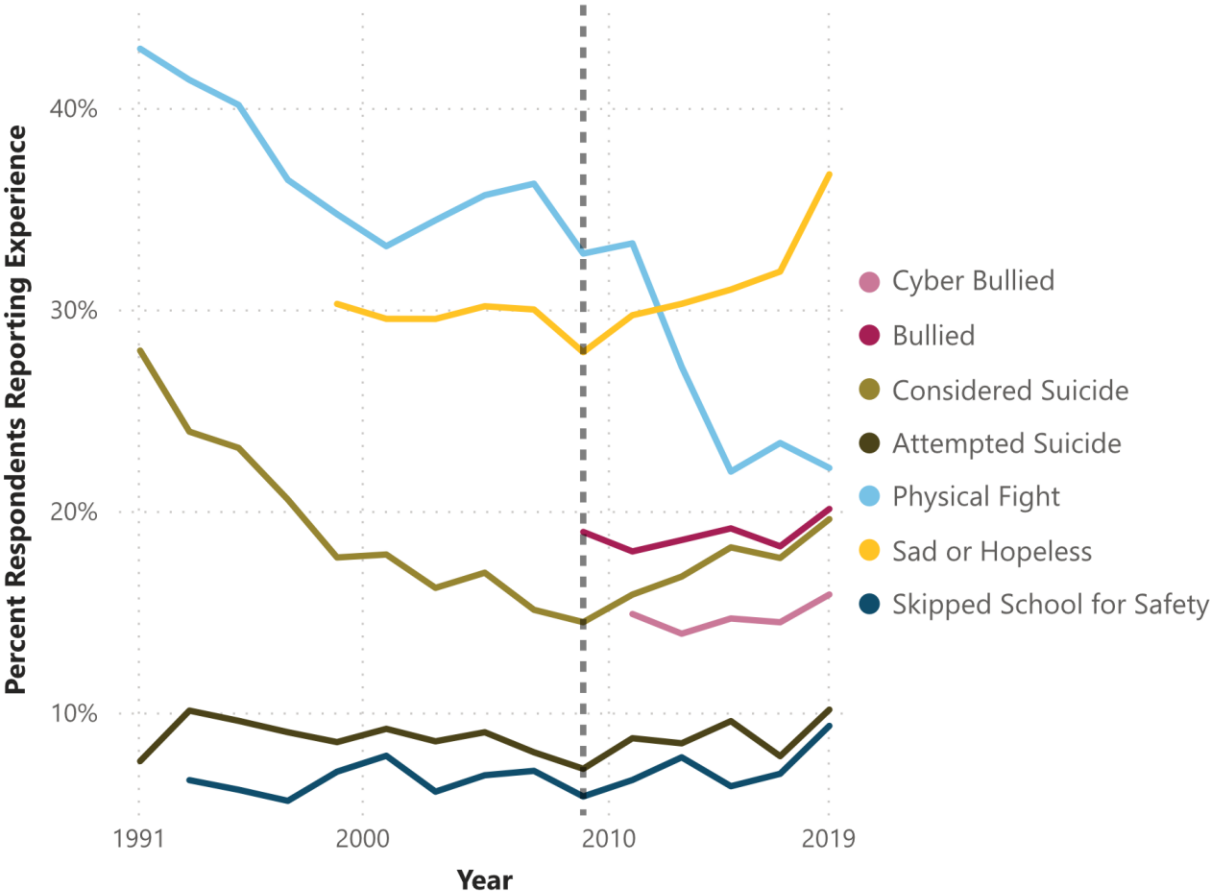


Trauma's Impact on Neurological Development

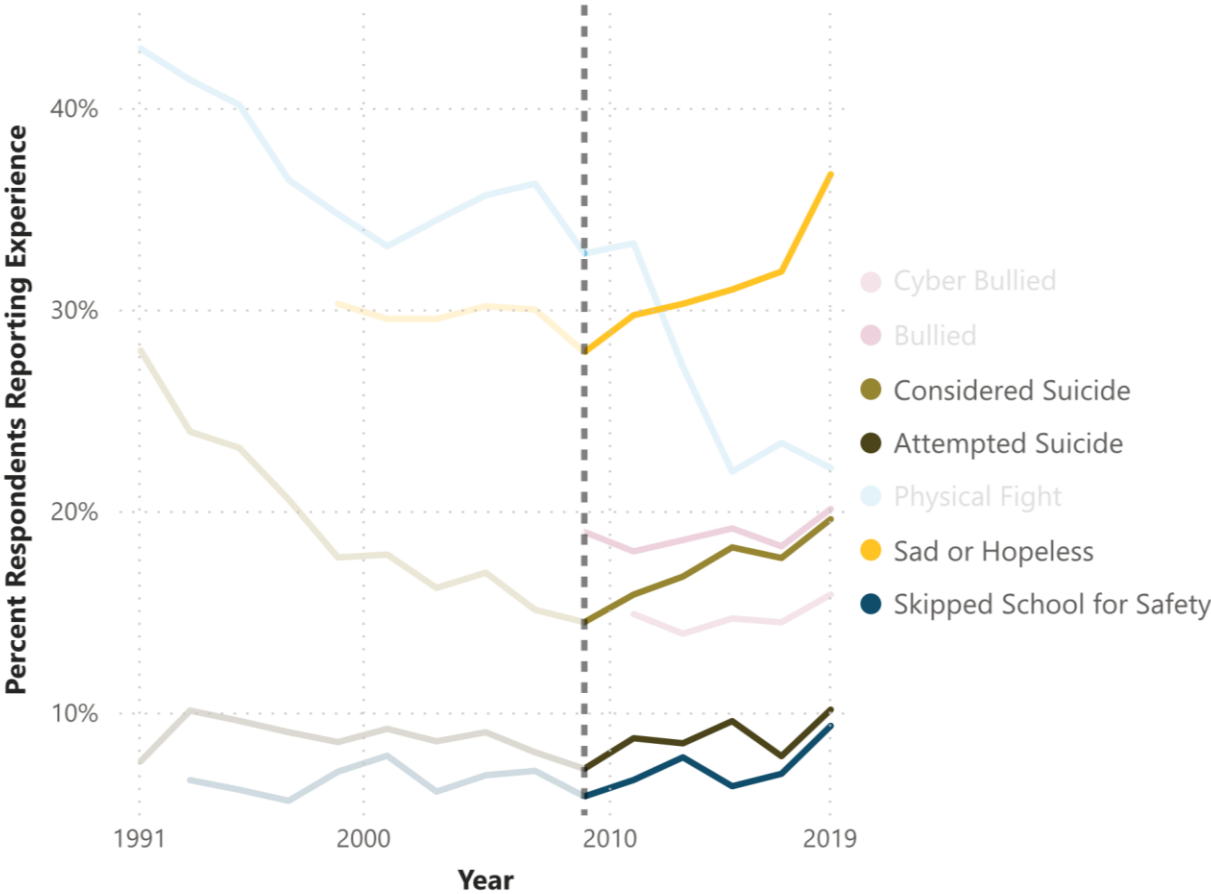


Increasing Prevalence of Mental Health / Safety Indicators in CDC Data

Youth Risk Behavior Surveillance System Trends



Youth Risk Behavior Surveillance System Trends



Schools can be a Source of Trauma

- Educational environments can be the setting and a contributing factor in traumatic events in students' lives
- They can remind students of **class / ability / socioeconomic divisions**
- Students can encounter **discrimination** from peers and teachers
- Some educational experiences such as test taking or receiving poor grades can be **high stress events**
- Overly strict or punitive **disciplinary procedures and environments** can be traumatic
- If areas for students with special educational needs are spatially segregated from or lower quality than the rest of the facility it can communicate / reinforce **concepts of inequality** or being lesser than
- **Students impacted by trauma may exhibit behaviors as a means to seek help, but they can be misinterpreted and punished which perpetuates trauma and stress** (Iacona & Johnson, 2018)



Potential Environmental Triggers

The Trauma-Sensitive Schools Training Package by the National Center of Safe Supportive Learning Environments includes the following possible triggers related to the built environment:

- Loud, chaotic environments
- Odors
- Physical touch
- Confinement
- Witnessing violence between other individuals, such as peers fighting
- Areas of school experienced as unsafe, such as bathrooms or less well-monitored areas
- Emergency vehicles and police or fire personnel

Triggers can result in a variety of **fight, flight, or freeze responses that can be easily misunderstood or mishandled** by staff who do not make the connection between the trigger and the current behavior.

"The students of Saint Paul Public Schools (SPPS) deserve respectful and inclusive learning environments that value students' gender identity and gender expression. SPPS ensures that all students have access to programming and facilities in which they feel comfortable and safe." - SPPS Inclusion Policy, 2015



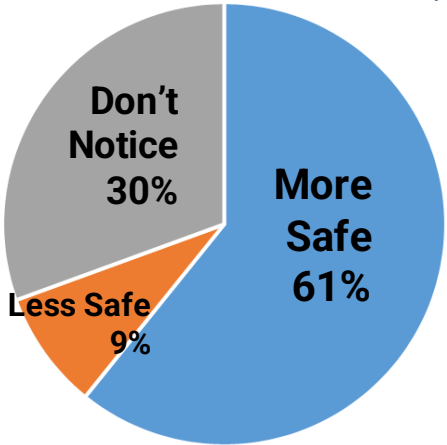
Inclusive Restrooms

- Full Height Walls + Doors
- Doors with minimal undercut
- Separate Ventilation + Floor Drain

- Hardware:
- Closers
 - Dual-Indicator Locks



Visibility to Open Handwashing Area



Trauma Informed Care Principles

1. Recognize that trauma-related symptoms and behaviors **originate from adapting to traumatic experiences**
2. View trauma in the **context of individuals' environments**
3. **Minimize risk of re-traumatization** or replicating prior trauma dynamics
4. Create a **safe environment**
5. Identify **recovery from trauma** as a primary goal
6. Support **control, choice and autonomy**
7. View trauma through a **sociocultural lens**
8. Foster **trauma resistant skills**
9. Develop strategies to **address secondary trauma** and promote self-care

**Principles that are not readily applicable to the design of the built environment have been excluded from this list*

Two Sets of Six Principles

SAMHSA's 6 Principles to a Trauma-Informed Approach

DRH 6 Principles for Trauma-Informed Design

Empowerment & Choice



Empowerment & Personal Control

Safety



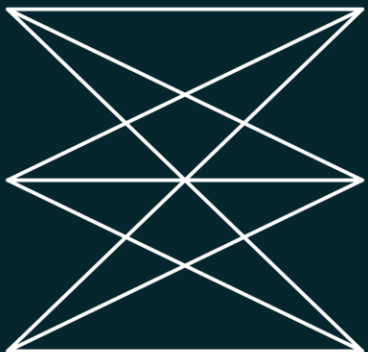
Security, Privacy & Personal Space

Peer Support



Sense of Community

Cultural, Historical & Gender Issues



Beauty and Meaning

Collaboration & Mutuality

Dignity & Self Esteem

Trustworthiness & Transparency

Stress Management

Pabel, J. & Ellis, A., 2015. Trauma-Informed Design: Definitions and Strategies for Architectural Implementation, Tallahassee, FL: Design Resources for Homelessness.

Substance Abuse and Mental Health Services Administration, 2014. SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach, Rockville, MD: Substance Abuse and Mental Health Services Administration.

Empowerment & Personal Control

Encourage individual agency, welcome self-expression and offer choice for occupants

This might mean:

- Pinup Space for Personalization
- Mirrors in Play / Recreation Areas
- Choice Between Variety of Furniture Types / Activities
- Operable Windows & Shades
- Space for Growing Plants and Hands-On Activities
- Writable Surfaces



Each strategy requires conversations with the community to understand what this means to them.

Safety, Privacy and Personal Space

Understand that perceived safety is crucial as basic safety. Prioritize clear wayfinding, sightlines and boundaries; minimize negative triggers; offer vantages of both prospect and refuge and paths of retreat; and recognize the role of program staff in creating a sense of safety and security

This might mean:

- Places of Refuge
- Clear Wayfinding
- Screened Boundary Conditions
- Inclusive Restrooms
- Passive Observation Sightlines



Each strategy requires conversations with the community to understand what this means to them.

Sense of Community

Create spaces that encourage camaraderie and collaboration and offer opportunities to belong

This might mean:

- Multi-Level Spaces
- Ties to Neighborhood, Community and Context
- Conversation Pieces
- Tailored Community Spaces
- Community Resources



Each strategy requires conversations with the community to understand what this means to them.

Beauty and Meaning

Honor culture and identity while creating spaces that spark and nurture imagination, hope and aspiration

This might mean:

- Culturally Relevant Designs
- Preference for Natural or Soft Materials
- Reduce Visual Complexity
- Calming Color Schemes
- Nature Walks and Learning Trails
- Accessible Courtyards



Each strategy requires conversations with the community to understand what this means to them.

Dignity and Self Esteem

Celebrate each individual's inherent worth, communicating positivity, emphasizing strengths, and maximizing potential

This might mean:

- Welcoming entry
- Thoughtful and well-designed storage
- Furniture and fixtures sized to occupant ages
- Use of side lighting near mirrors
- Project display spaces



Each strategy requires conversations with the community to understand what this means to them.

Stress Management

**Cultivate a comfortable, calm
ambiance that supports relaxation,
self-soothing, stress management
and coping through design details
such as lighting, sound mitigation,
natural elements and access to
nature**

This might mean:

- Plentiful Natural Lighting / Views
- Design for Ease of Cleaning
- Interior Lighting for Circadian Rhythms
- Seating Integrated into Windows
- Soft Textures and Forms



*Each strategy requires conversations
with the community to understand
what this means to them.*

Design Approaches to Addressing Trauma Through Built Form

Passive

Spaces designed to be **less likely to trigger** trauma-based reactions by the nature of what is **included** in them and **what is not**

Intervening

Spaces designed to **help** those who are currently experiencing a trauma-based reaction to **recover** in a **healthy and supported** manner

Latané

Schools That Heal



WISE

DESIGN FOR BELONGING

HM
683
.W57
2022

Steve Maslin **Designing Mind-Friendly Environments**



PETER
BLOCK

COMMUNITY

THE STRUCTURE
OF BELONGING

HM
756
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2018

FOSTERING RESILIENT LEARNERS ✦ Kristin Souers with Pete Hall



THE HAPPY DESIGN TOOLKIT

Ben Channon



Rise Early Learning

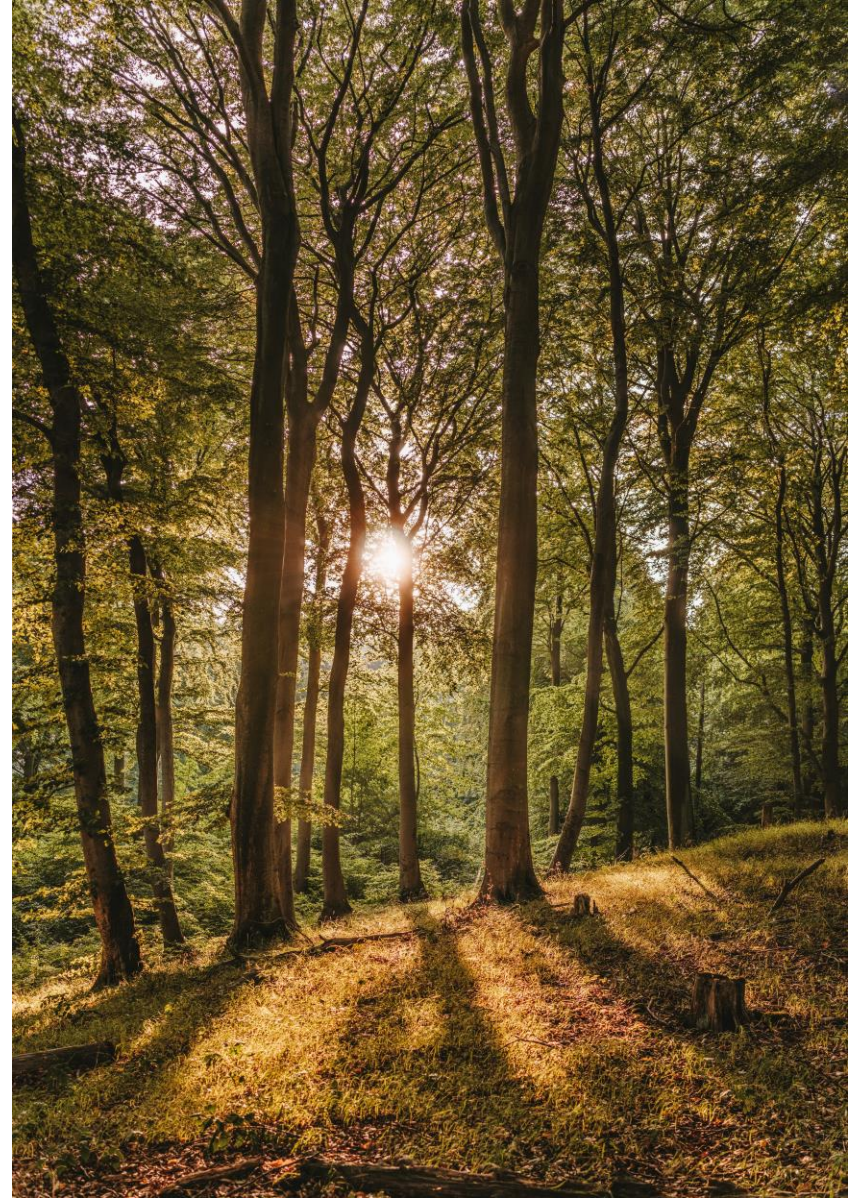
**Assessing an Early Childhood Project
through the Lens of Trauma Informed Design**



Play



Equity



Trauma Informed Design

Project Overview

- Affordable Housing + Affordable Childcare + Wrap Around Services
- First of this kind of partnership in Minnesota
- 62 spot childcare with 31 of the spots designated as affordable (paying on average 50% of full price)
- Partnership: Westwood Lutheran Church along with 6 other Faith Communities
- 501c3 non-profit
- The center is opening this month in a Common Bond Communities development of 100-120 units of affordable housing



Rendering courtesy of Kaas Wilson Architects

Rise Early Learning Center welcomes all families and teachers to a **nurturing, equitable, and fun** space.

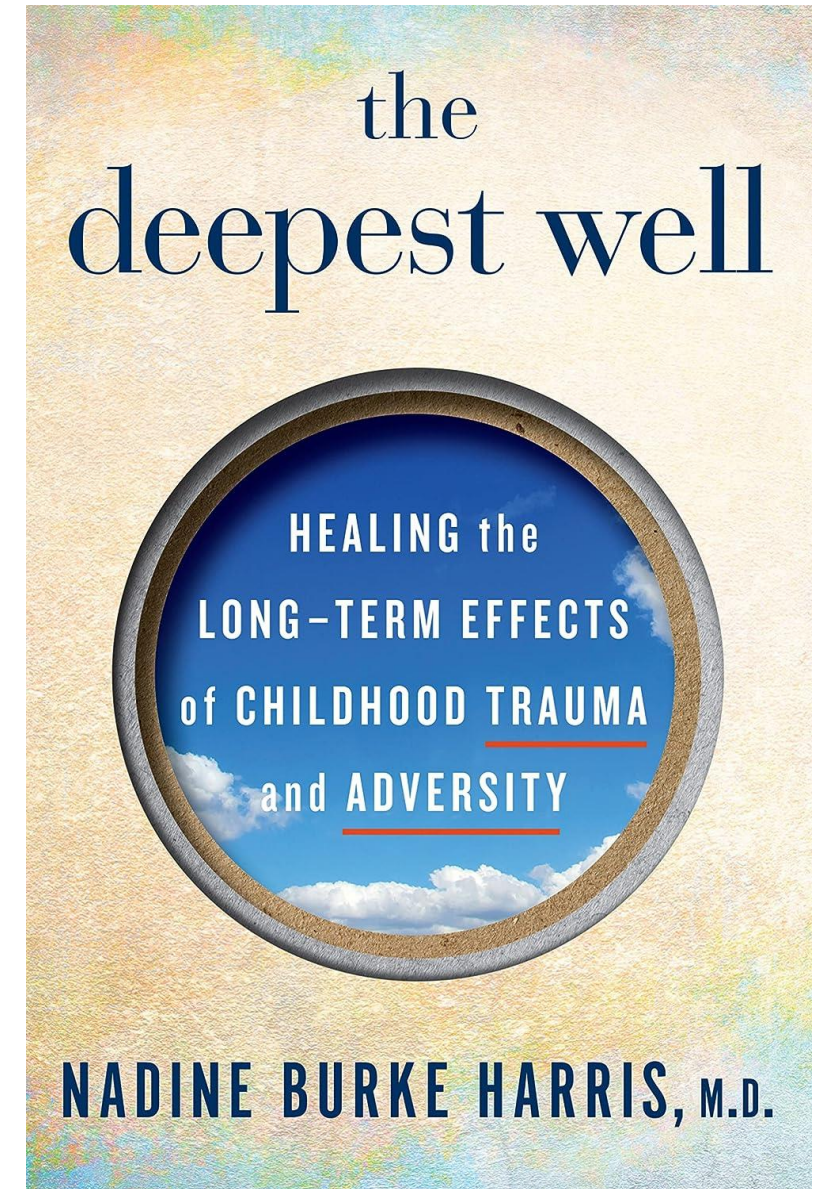
Curiosity and **exploration** are unbounded as the space is **flexible** and **adaptable** to support open-ended **play** and **creativity**.

Natural, textural, and clean materials provide a backdrop for children's activities, projects, and artwork to shine.



Collective Reading

- “...early experiences literally shape the brain” (146)
- “The most effective way to rewire the brain is to implement early interventions that help to prevent the stress response from becoming dysregulated and that support practices that buffer the stress response. By doing this you give the brain the greatest opportunity to grow in new and healthy ways...such as: **sleep, exercise, nutrition, meditation.**” (146)
- “...the data suggests that if a child grows up in a stressful community environment **but has a well-supported and healthy caregiver**, he or she is much more likely to stay in the tolerable stress zone as opposed to the toxic stress zone.” (149)



Trauma Informed Design

How can learners feel a sense of control and personal identity in a space?

- Ambient side lighting – **eliminate overhead lights**
- Ceiling is critical, “beef up” ceiling grid so that the ceiling can be flexible to change over time
- Ample **mirrors** at child height
- Surfaces they can manipulate
- **Height of floor is varied so kids can take risks – wavy floor or platforms**
- Operable windows and borrowed light where needed
- **Avoid automatic flushing toilets**

What does it mean to be protected in a space?

- Welcome space
- Widen corridor with clear sightlines
- Visibility
- **There’s space for “Little conversations”**
- Keep it simple, not overdesigned
- When you enter, it should feel inviting and welcoming, good acoustics
- Not crowded or cluttered
- **Window seats**

Where do learners like to go to feel safe and calm?

- **Texture – children can engage with various textures for self-regulation**
- A place to settle in
- **Acoustics are controlled**
- Control of temperature, noise, overcrowding, lighting
- **Heated slab on floor – learners this age spend a lot of time on the floor**

Equity

How does the space encourage interaction for ALL?

- **Encourage children to do things themselves – sink level – can it be lower than 24”, as not all bodies are the same.**
- Variation in heights – not one size fits all
- Stairs/slopes for kids

How might we leverage space to support EVERYONE & ALL activities?

- **Supportive environment for teachers (equity is not just about the learners)**
 - Grab bar for support – knees and backs
 - Cribs – Elevate cribs to reduce bending
- One-on-one space
- **Make child feel a part of the space**
 - Display should be flexible to showcase both individual and collaborative work
 - Some displays should be in the hall, some in the rooms – give the rooms personality
 - Long-term display opportunities that show the history and community over time

Play

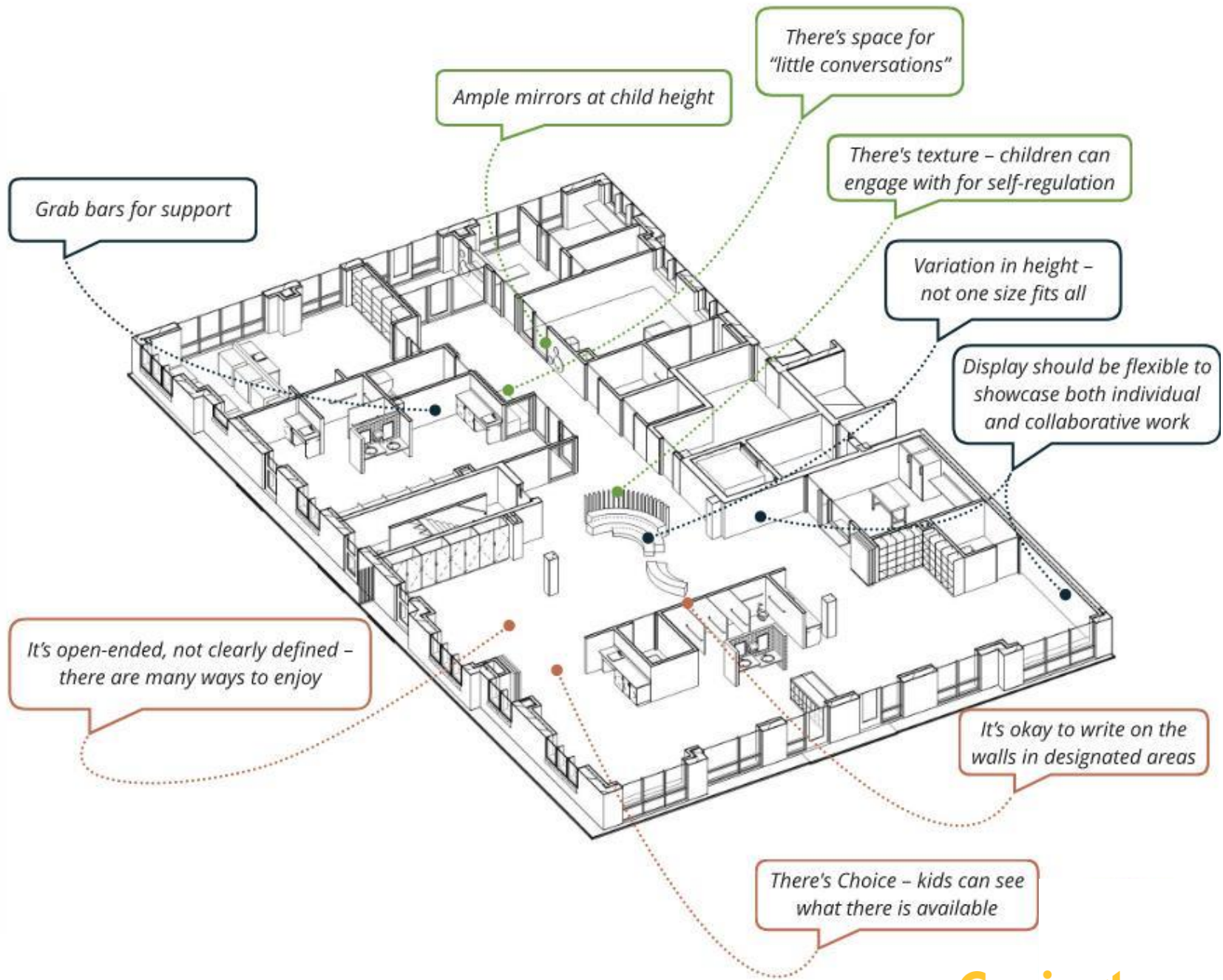
What does an architecture of curiosity look like?

- **It's okay to write on the walls in designated areas**
- Mirrors on the walls
- **It's open-ended, not clearly defined – there are many ways to enjoy**
- Clear plexiglass to peek through
- **Choice – kids can see what is available**
- 3D investigation area – allows for broader 3D display of what they're working on and sparks questions
- **Give ability to explore space at varied heights**

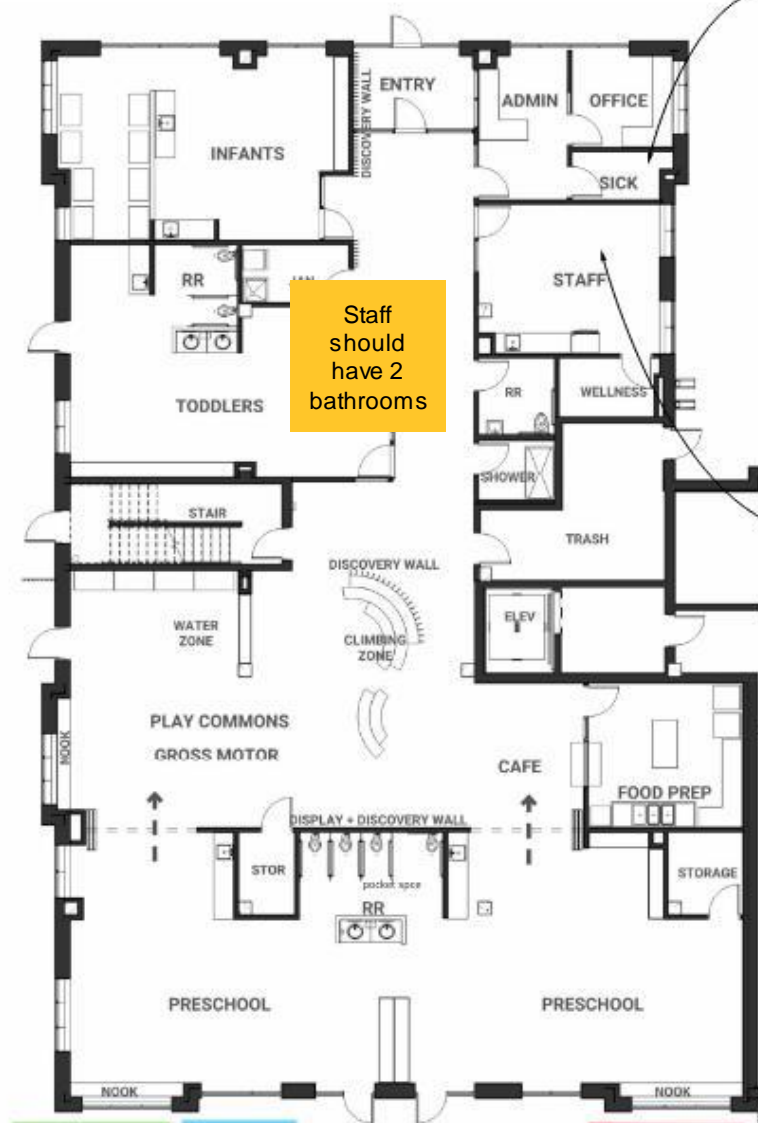
What are the spatial implications/needs to maximize Discovery & Learning?

- Think about flooring: soft, easy to clean, makes space flexible, patterns
- Make your own zones (individual, small group, large group, messy)
- Never enough storage
- **Like open storage vs closed to spark curiosity (“I want to see what that is!”)**
 - Things in the classroom would ideally be rotated between closed storage and open shelving in classroom to keep things new and fresh
- **Car seat storage on top cubbies – out of the way**
- Outdoor shed for outdoor learning and play items

HEART OF PLAY



HEART OF PLAY



toilet + sink in sick room

it's heart of play but more boundaries

Ample mirrors at child height

There's space for "little conversations"

There's texture – children can engage with for self-regulation

Variation in height – not one size fits all

Display should be flexible to showcase both individual and collaborative work

Grab bars for support

like communal space for staff

It's open-ended, not clearly defined – there are many ways to enjoy

boundaries create comfort for both

It's okay to write on the walls in designated areas

a teacher and 5 kids to go have a quiet story- could be nook area

children need us to give them boundaries

How do we accommodate runners?

consider garage doors to connect in lieu of pocket doors

extend infant and toddler room for activity

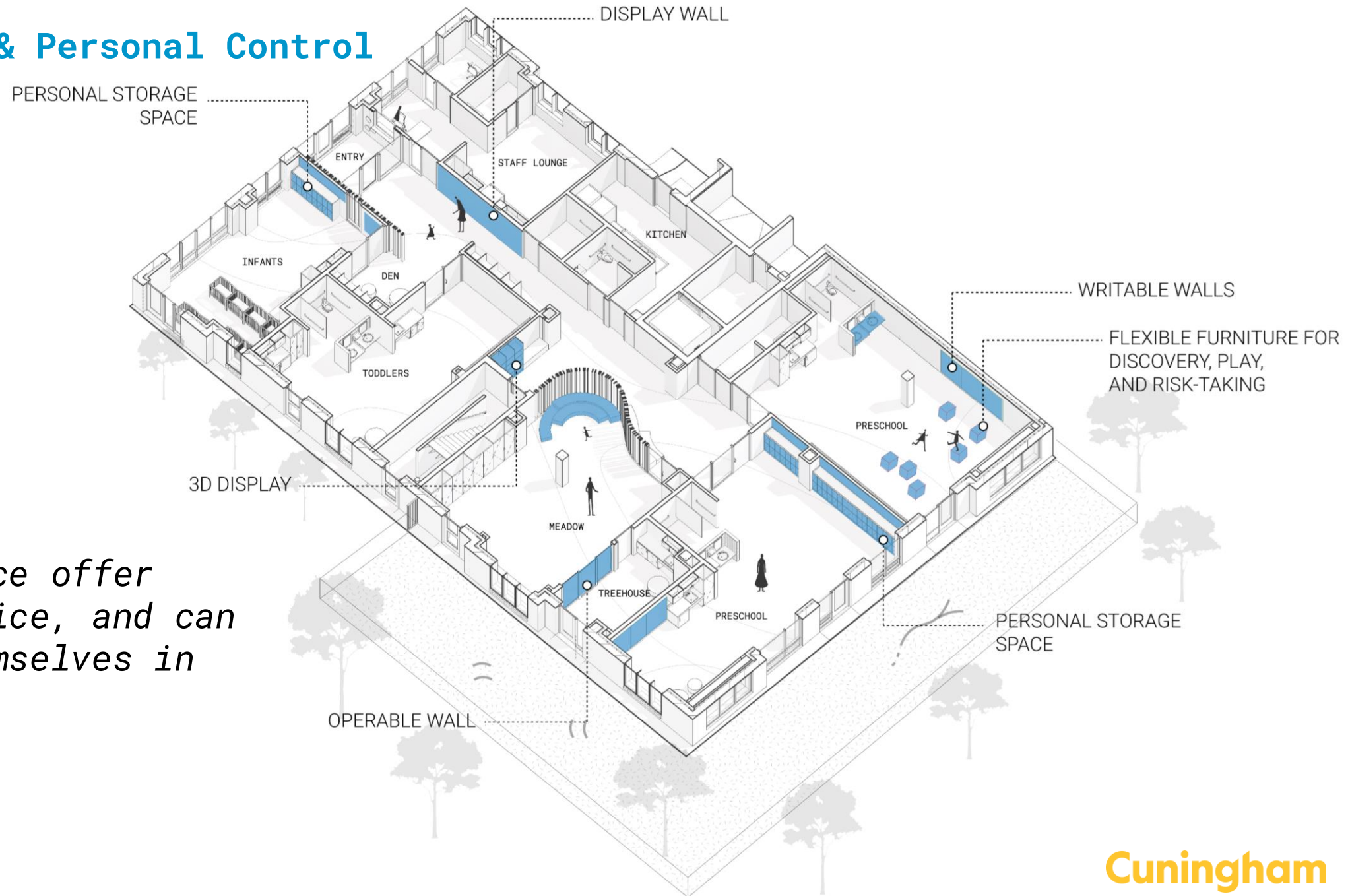
There's Choice – kids can see what there is available

like the connection when ratios are low

like that it's open potential

too open, it makes me nervous

Empowerment & Personal Control

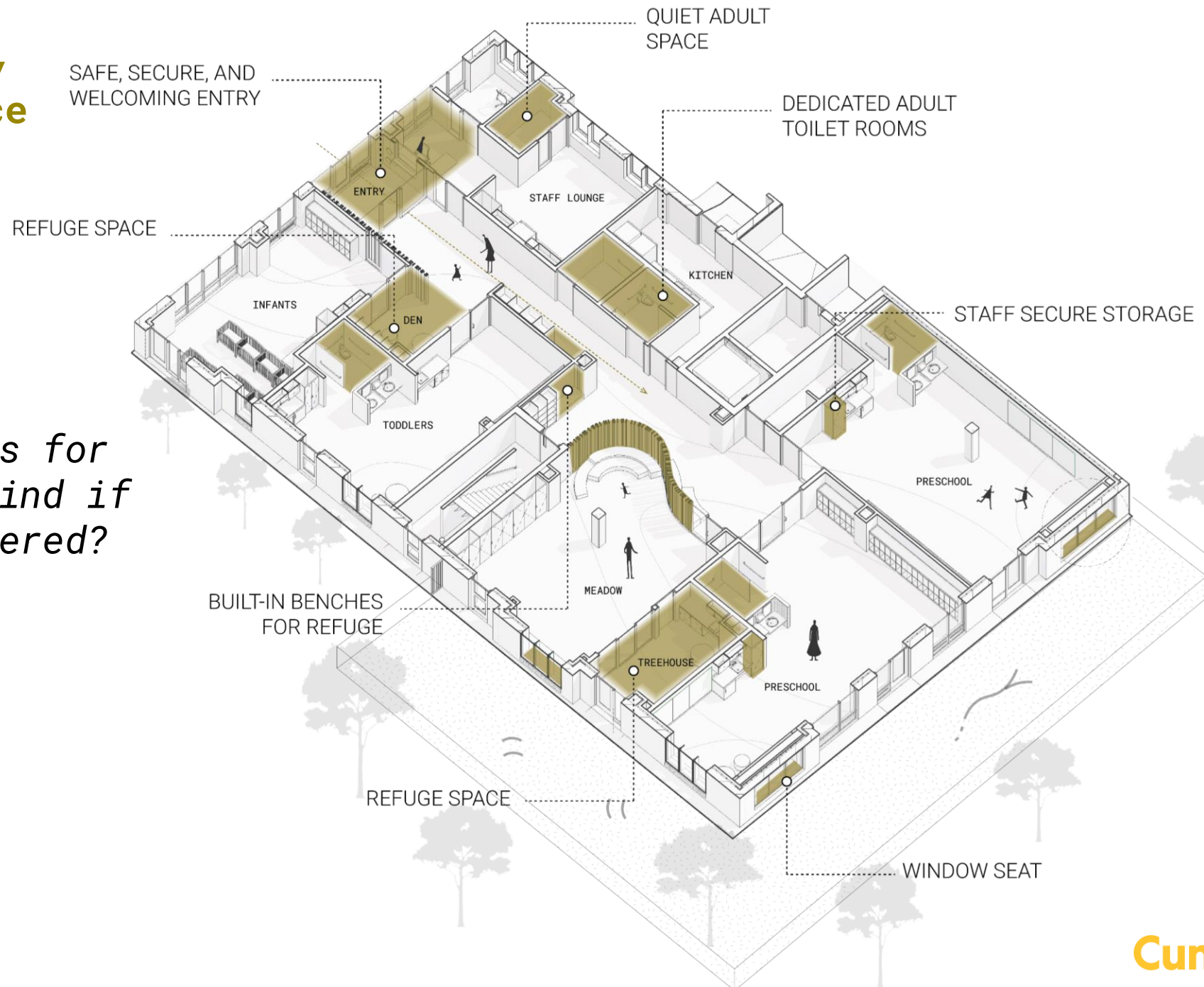


Does the space offer learners choice, and can they see themselves in the space?



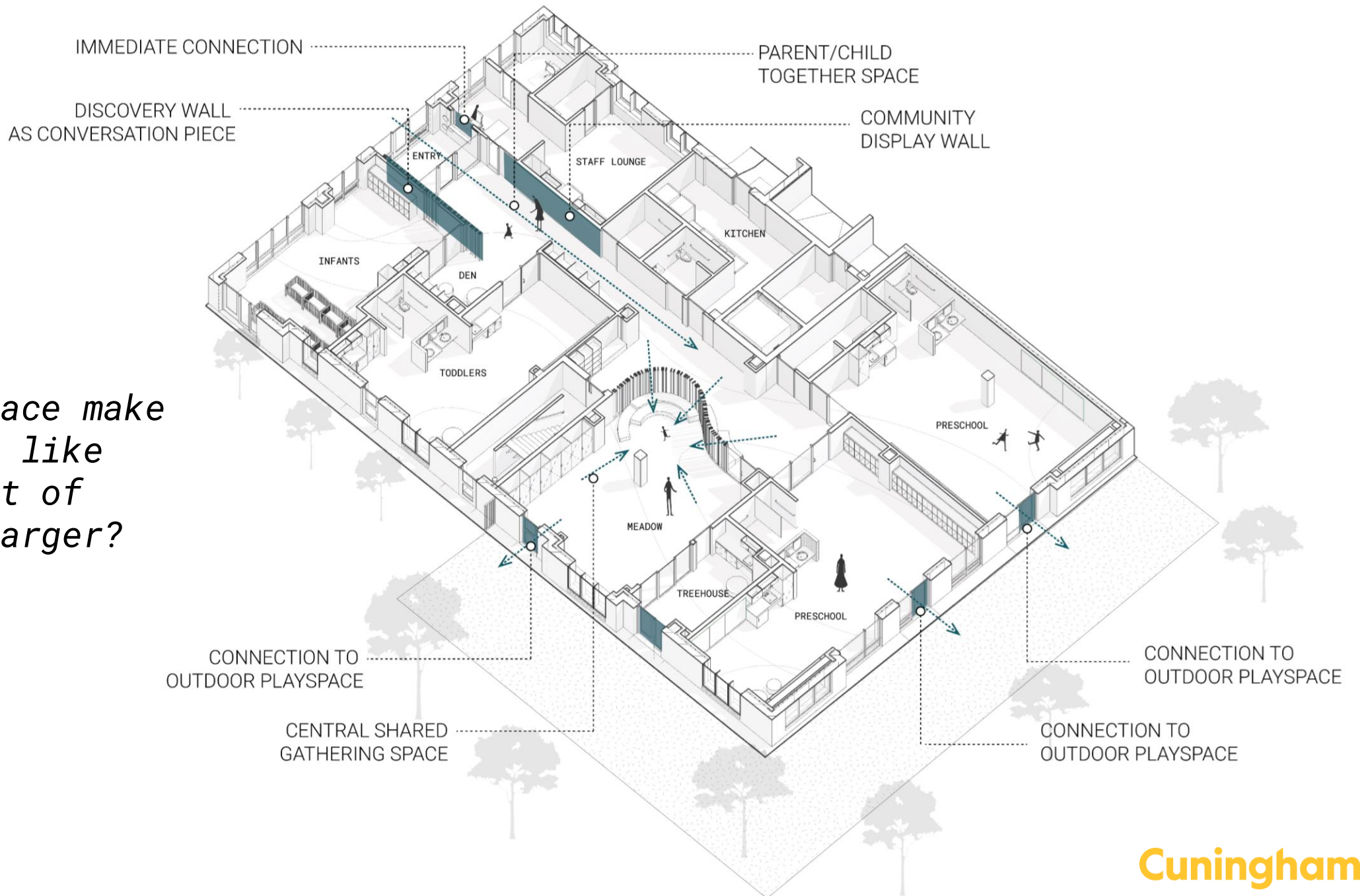
Safety, Privacy & Personal Space

*Are there spaces for
learners to unwind if
they feel triggered?*



Sense of Community

Does the space make people feel like they're part of something larger?

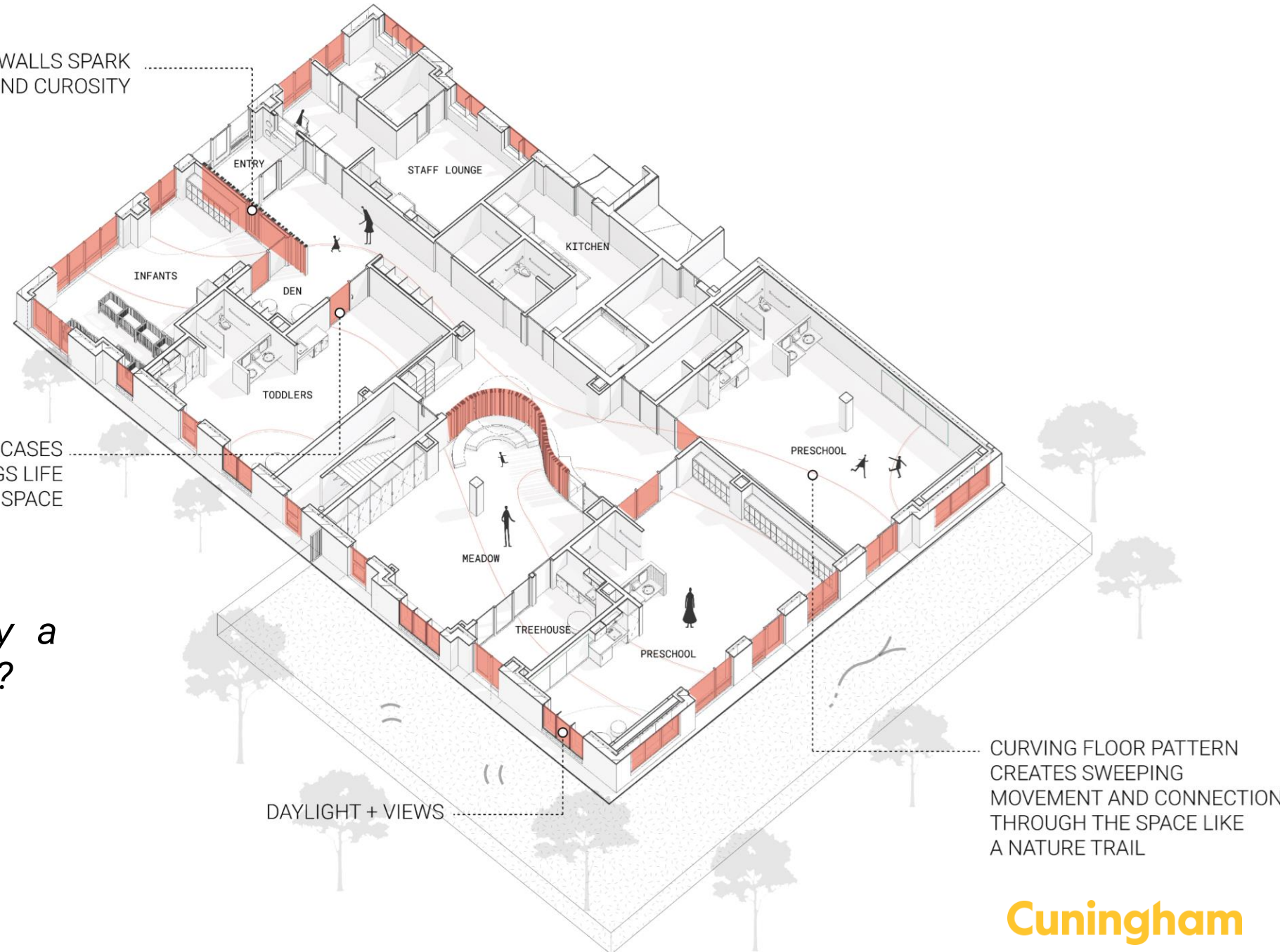


Beauty & Meaning

DISCOVERY WALLS SPARK
IMAGINATION AND CURIOSITY

TRANSPARENCY SHOWCASES
ACTIVITIES AND BRINGS LIFE
TO THE SPACE

*Does the space convey a
feeling of belonging?*

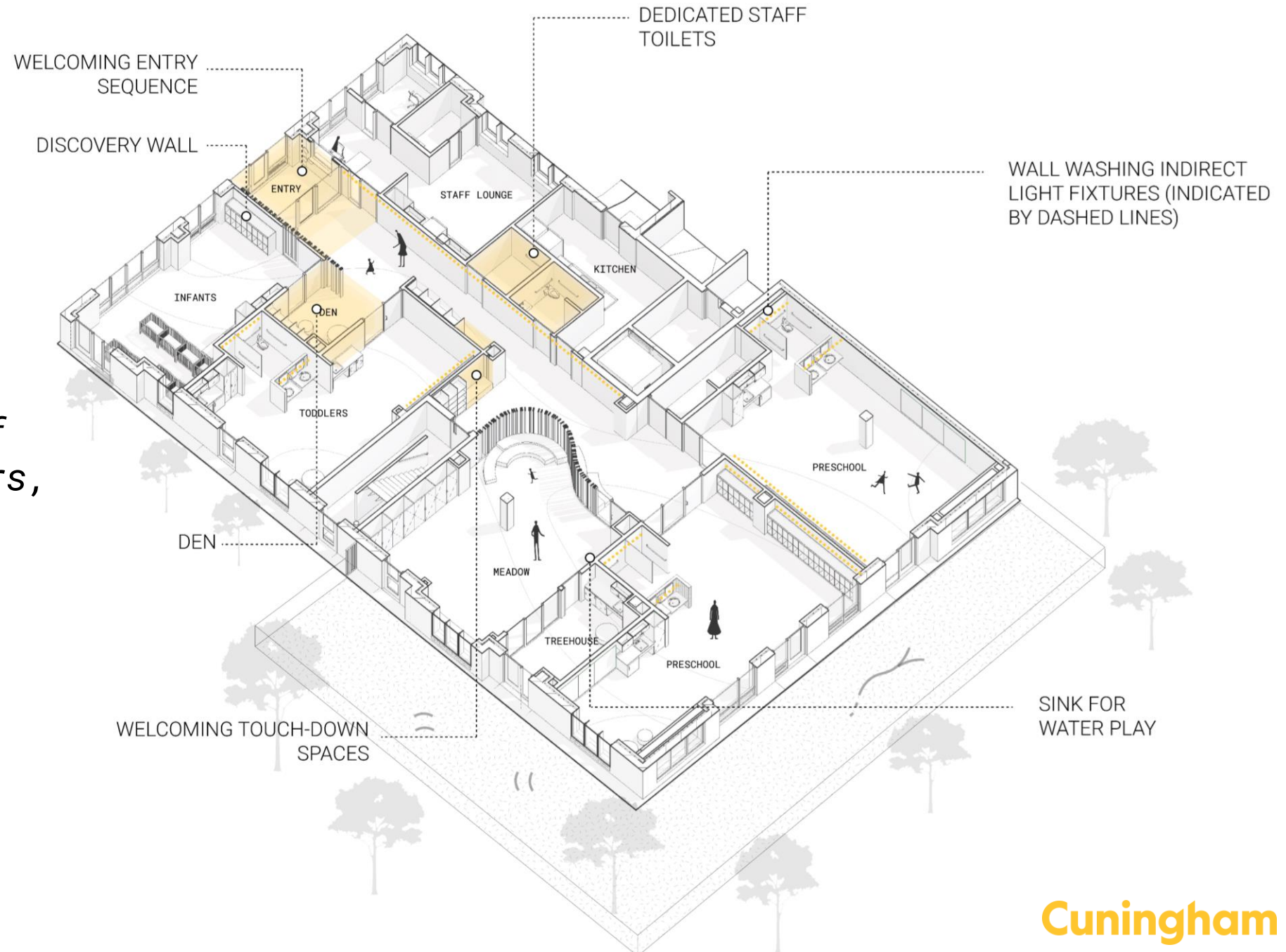


CURVING FLOOR PATTERN
CREATES SWEEPING
MOVEMENT AND CONNECTION
THROUGH THE SPACE LIKE
A NATURE TRAIL



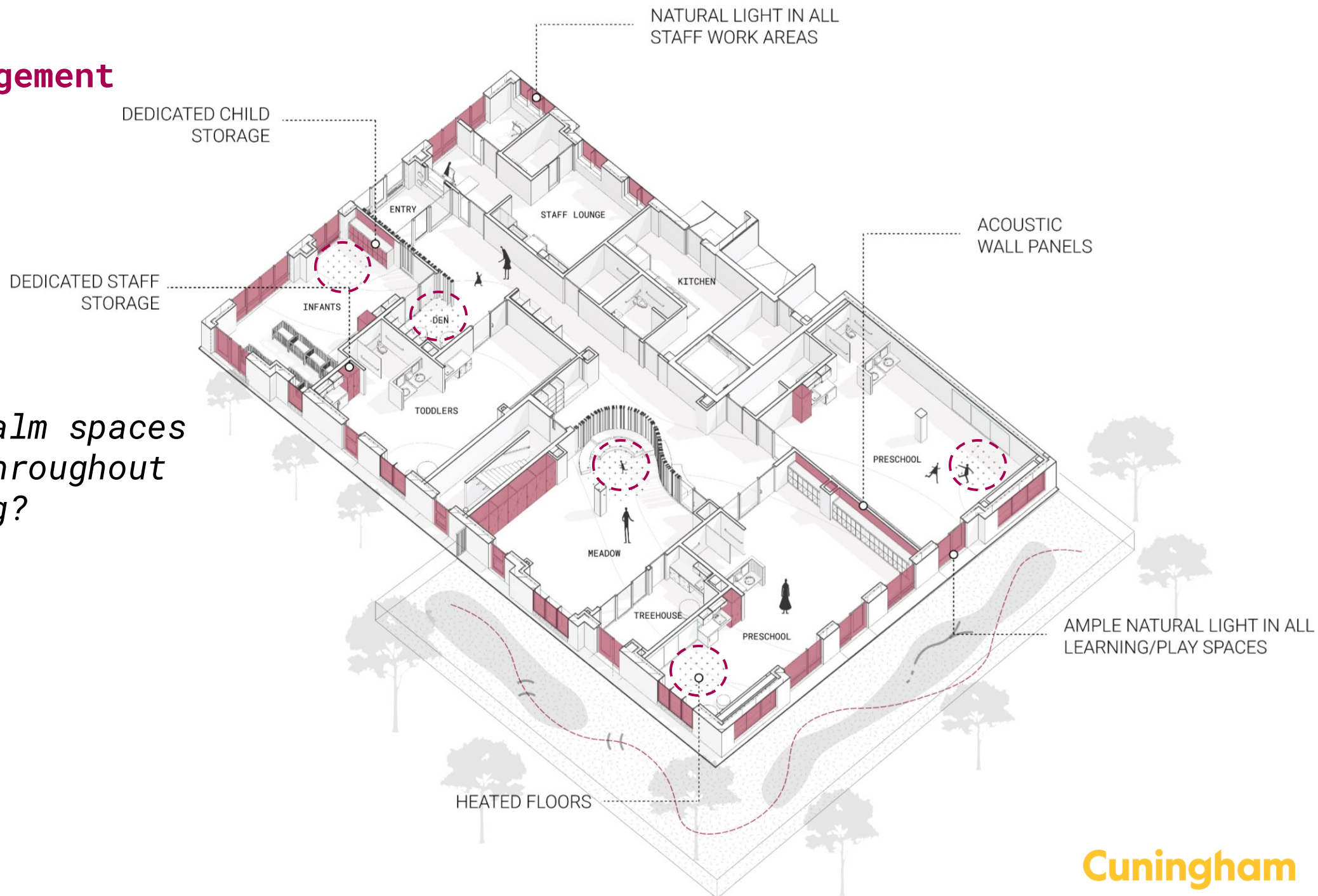
Dignity & Self-Esteem

Do all occupants of the space – learners, parents, community, staff – feel supported?



Stress Management

Are there calm spaces to unwind throughout the building?

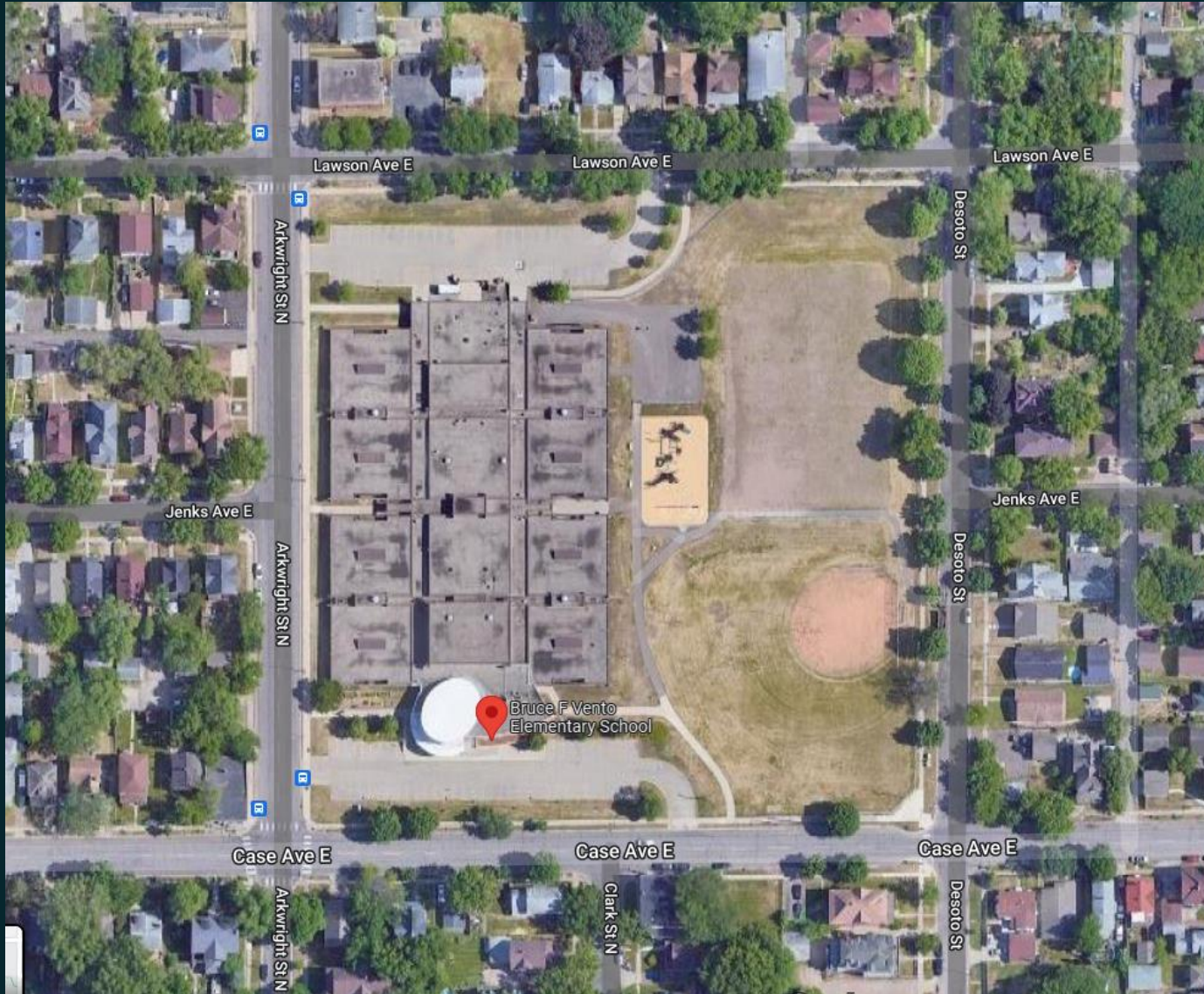




Bruce Vento Elementary + Early Childhood Hub

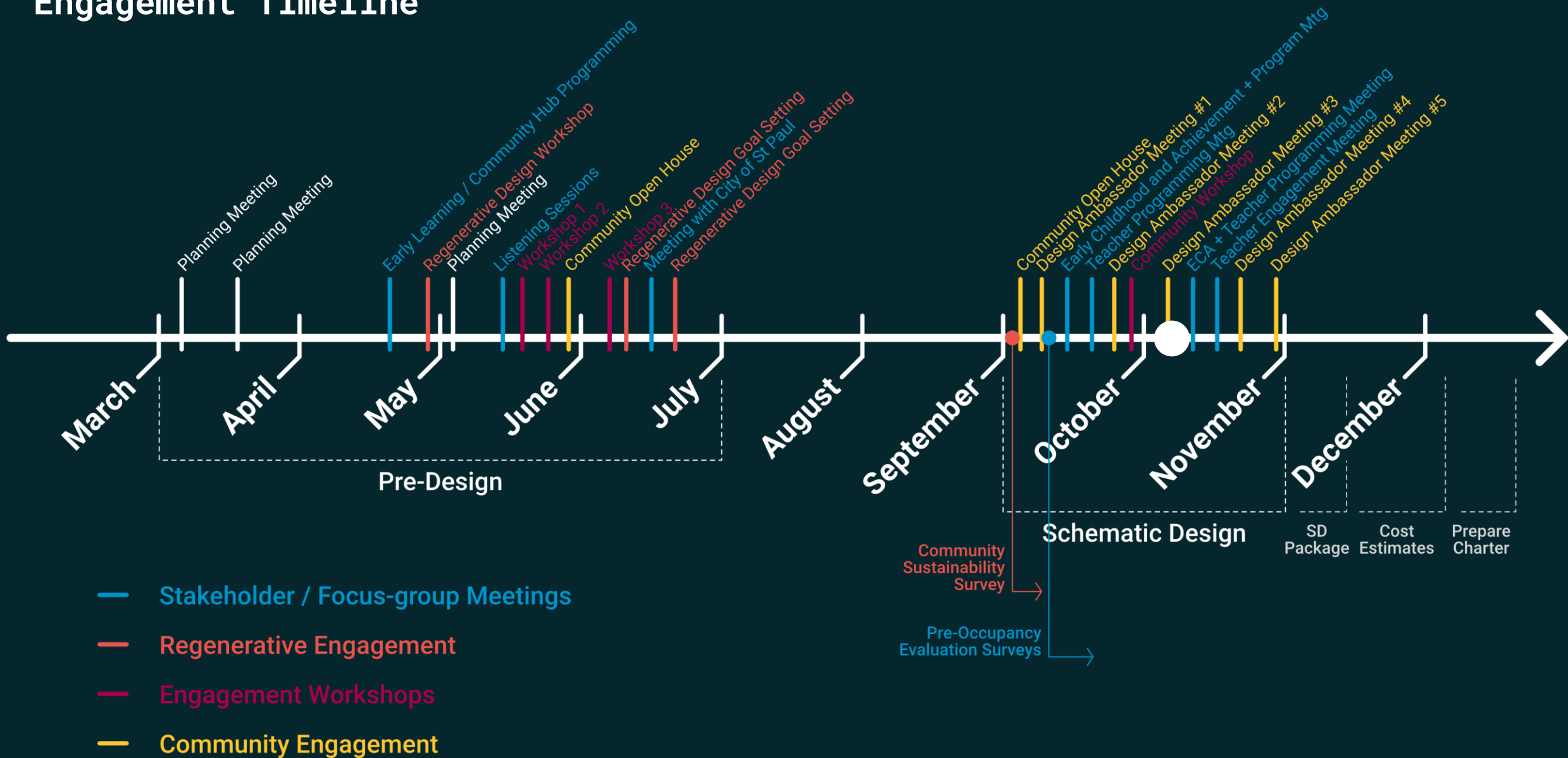
**Applying Trauma Informed Design Concepts
in Early Phase Design of a New Project**

Project Scope



- Merging two St. Paul Public School communities into one
- John A. Johnson School Community + Bruce Vento (BV) School Community combine at existing BV School
- Adding Early Childhood and Wrap Around Services (housing, legal, dental, ECFE, ECSE)
- Existing Elementary School stays in operation during construction
- New School opens in Fall of 2025

Engagement Timeline



WE SEE...

Bruce Vento Community will **welcome** all learners, staff, families, and community to a **vibrant, unique, and inspiring** environment. Gardens, play spaces, views, art, and natural elements will create a seamless connection between **indoor and outdoor** space. **Inclusive, comfortable, and intentional** spaces create an environment for all to **learn** and **grow** together. **Open** and **bright** areas will be balanced by **calming** zones, creating a place to feel **safe** and **supported**. The environment will be **flexible** and **adaptable** to encourage a wide range of uses and support future needs. Community resources like gardens, kitchens, technology, educational opportunities, and gathering spaces for partners and families will invite everyone to **feel at home**.

Bruce Vento will **celebrate the diversity of our families** and be the **heart of the community**.



Cunningham

Through the Lens of Trauma Informed Design: Community Open House

What is special here?

———— **Sense of Community**

Where do you feel like you belong?

———— **Dignity & Self-Esteem**

How would you like to see your culture, identity,
and community celebrated?

———— **Beauty & Meaning**

How can we make school more playful?

———— **Empowerment & Personal Control**

Where do you like to go to relax?

———— **Stress Management**

What makes you feel safe?

———— **Safety, Privacy & Personal Space**

Through the Lens of Trauma Informed Design: Teacher Surveys

▪ Rate your overall satisfaction:

- | | | |
|--|-------|---|
| • Outdoor teaching/learning opportunities (<i>outdoor classrooms, opportunities to engage with the landscape</i>) | _____ | Stress Management |
| • Equitable access (<i>accessibility, access to resources and space</i>) | _____ | Dignity & Self-Esteem |
| • Opportunities to collaborate with other teachers and staff (<i>shared work spaces, shared resources, time to connect</i>) | _____ | Sense of Community |
| • Sense of security and control (<i>clear wayfinding, sightlines, paths of retreat, refuge spaces, inclusive restrooms</i>) | _____ | Safety, Privacy & Personal Space |
| • The school celebrates and represents its occupants (<i>meaningful symbols and patterns, spaces that spark the imagination</i>) | _____ | Beauty & Meaning |
| • Opportunities for personalization (<i>project display space, classroom display, flexible furniture, variety of settings</i>) | _____ | Empowerment & Personal Control |
| • Welcoming and Inclusive (<i>does the building make you feel welcome?</i>) | _____ | Dignity & Self-Esteem |
| • Spaces that Support Student Mental Health (<i>calming rooms, sensory rooms, accessible staff support</i>) | _____ | Stress Management |

Through the Lens of Trauma Informed Design: Student Surveys

1. I can look out the window and see trees and plants at school	3. I enjoy learning at school
2. I feel like I belong at school	4. I'm excited to go to school

Answer the following questions as they relate to the indoor spaces at your school	Answer the following questions as they relate to the outdoor spaces at your school
5. There are indoor spaces where I can move and play	9. There are outdoor spaces where I can move and play
6. There are indoor spaces where I can make things	10. There are outdoor spaces where I can make things
7. There are indoor spaces where I can learn and explore	11. There are outdoor spaces where I can learn and explore
8. There are indoor spaces where I can feel calm	12. There are outdoor spaces where I can feel calm

Stress Management

Beauty & Meaning

Sense of Community / Dignity & Self-Esteem

Empowerment & Personal Control

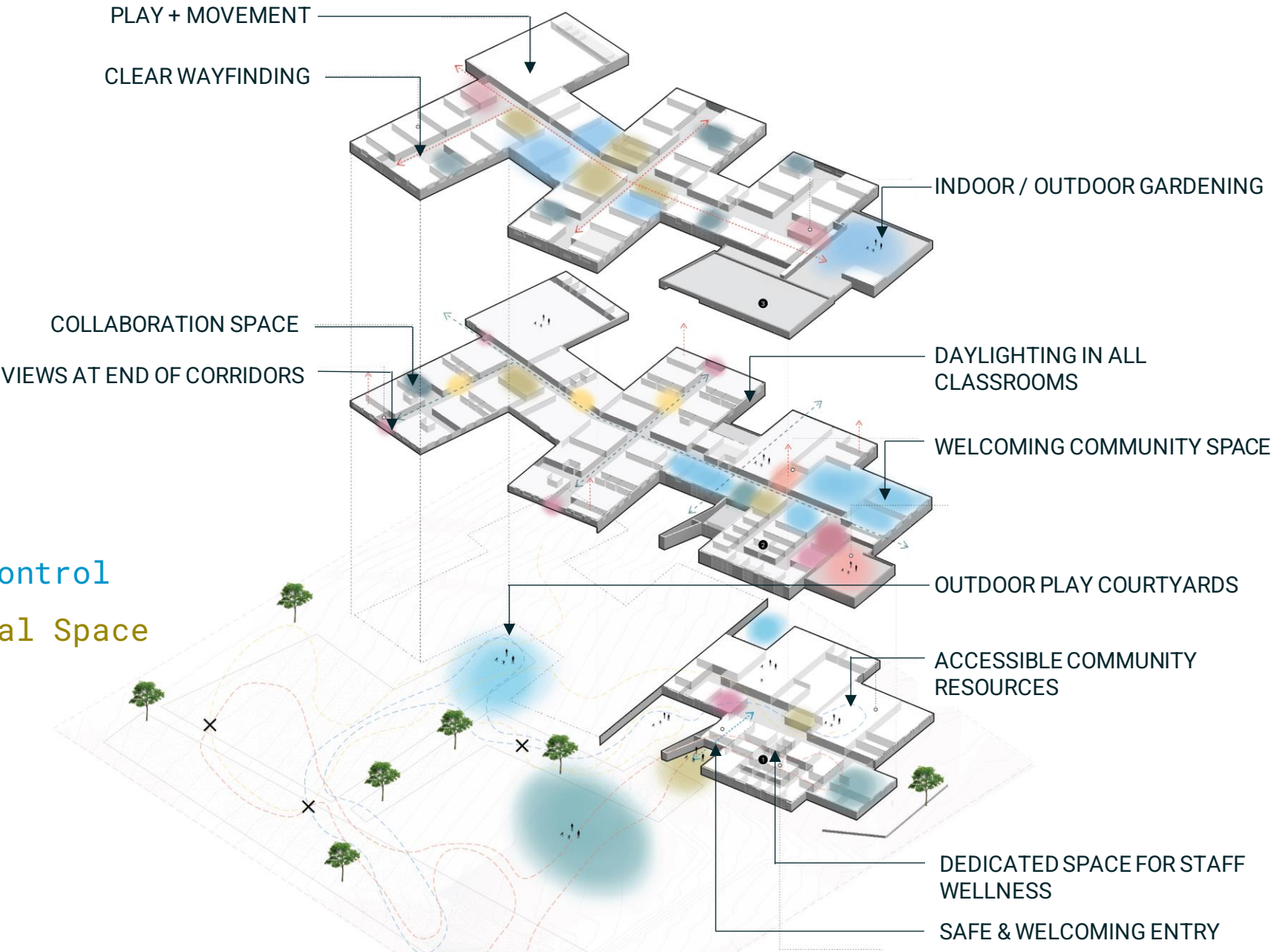
Empowerment & Personal Control

Empowerment & Personal Control

Stress Management

TID Diagramming

- Dignity & Self-Esteem
- Sense of Community
- Beauty & Meaning
- Stress Management
- Empowerment & Personal Control
- Safety, Privacy & Personal Space



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<p>Session 1 and 2 (Week 1)</p> <p>MULTI-LEVEL SPACES</p> <p>Participants will be exposed to concepts around built, the surrounding and social activity. This will serve to build the awareness to connect built and urban form to the surrounding spaces and to connect social and urban form to the surrounding spaces and to connect social and urban form to the surrounding spaces.</p>	<p>Session 3 and 4 (Week 2)</p> <p>TEST TO REVEAL FORM AND COMMUNITY AND CREATIVITY</p> <p>This is a creative test to reveal a broad range of a subject's values, beliefs, and attitudes. The test is designed to reveal a broad range of a subject's values, beliefs, and attitudes. The test is designed to reveal a broad range of a subject's values, beliefs, and attitudes.</p>	<p>Session 5 and 6 (Week 3)</p> <p>CONVERSATION PEGS</p> <p>The conversation pegs are designed to be used in a variety of ways. They can be used to start a conversation, to keep a conversation going, or to end a conversation. They can be used in a variety of ways. They can be used to start a conversation, to keep a conversation going, or to end a conversation. They can be used in a variety of ways.</p>
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The diagram illustrates the four domains of the 21st-century skills framework, each with a brief description and a list of key skills:

- Critical and Creative Thinking** (top-left):
 - Domain:** Critical and Creative Thinking
 - Skills:** Analyze, Evaluate, Create, Innovate, Problem-Solve, Design, Reflect, Communicate
- Communication and Collaboration** (top-right):
 - Domain:** Communication and Collaboration
 - Skills:** Listen, Speak, Write, Read, Collaborate, Teamwork, Negotiate, Mediate, Conflict Resolution, Problem-Solve, Design, Reflect, Communicate
- Citizenship and Character** (bottom-left):
 - Domain:** Citizenship and Character
 - Skills:** Respect, Responsibility, Integrity, Honesty, Compassion, Empathy, Tolerance, Diversity, Global Awareness, Environmental Stewardship, Social Responsibility, Problem-Solve, Design, Reflect, Communicate
- Career and Learning** (bottom-right):
 - Domain:** Career and Learning
 - Skills:** Self-Awareness, Self-Management, Self-Directed Learning, Career Development, Problem-Solve, Design, Reflect, Communicate

Acoustic Separation / Mitigation Use acoustic separation and mitigation to reduce transceivers or connecting units on radiators	Avoid Heavy Electrical Systems / Lighting Equipment and lights that create a humming, vibrating or audible and constant sound can be distracting, obnoxious and annoying. This is particularly severe for individuals with a history of traumatic experiences who may be particularly sensitive to audible sounds.
Acoustic Separation / Mitigation Use acoustic separation and mitigation to reduce transceivers or connecting units on radiators	Avoid Heavy Electrical Systems / Lighting Equipment and lights that create a humming, vibrating or audible and constant sound can be distracting, obnoxious and annoying. This is particularly severe for individuals with a history of traumatic experiences who may be particularly sensitive to audible sounds.
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<p>HINDRIS IN PLAY / RECREATION AREAS</p> <p>Approved and Private Use</p> <p>Approved</p> <p>Not Approved</p> <p>Minor help occupants should their appearance and adjust their self presentation</p>	<p>OPERABLE BLINDS</p> <p>Approved and Private Use</p> <p>Approved</p> <p>Not Approved</p> <p>Allow occupants to operate if drive down blinds in the morning and evening. This can be achieved by linking environmental programs or installing a space wide comfortable / force to close / springing / force related device.</p>	<p>OPERABLE WINDOWS</p> <p>Approved and Private Use</p> <p>Approved</p> <p>Not Approved</p> <p>Provide occupants with a sense of control over the surface for position, variability and speed in the space</p>
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Include Restroom Designs (Consideration)

Restroom designs and layouts are an important part of a building's design, and can provide a space for relaxation and recovery from long hours of training events. They are also a key feature of a building's design, and are generally a higher quality construction than "typical" restroom designs.

Safety, Security and Privacy (Consideration)

Design Layout and Plans for Occupant Personal Space (Consideration)

Personal space is a key consideration in building design, as it is a key factor in determining the overall quality of a building's design. Personal space is a key factor in determining the overall quality of a building's design, and is a key factor in determining the overall quality of a building's design.

Safety, Security and Privacy (Consideration)

Dynamic Furniture (Consideration)

Building chairs, seating and other furniture that allow for flexible movement can help buildings "breathe" and adapt to changing needs and demands.

Screened Boundary Conditions (Consideration)

Screened boundaries create partial visibility. This allows for passive observation and connection between two spaces, while filtering distractions from high activity spaces. A screened boundary can create the sense of enclosure without creating a sense of connection from the exterior enclosed space.

Safety, Security and Privacy (Consideration)

Safe Spaces for Passive Observation (Consideration)

Providing a place for passive observation is a key factor in building design, as it is a key factor in determining the overall quality of a building's design. Safe spaces for passive observation are a key factor in determining the overall quality of a building's design, and are a key factor in determining the overall quality of a building's design.

Safety, Security and Privacy (Consideration)

Space for Napping (Consideration)

It is an important consideration for the occupier to have a space where they can nap or rest. This is a key factor in determining the overall quality of a building's design, and is a key factor in determining the overall quality of a building's design.



How might we design
for all 6 principles in
key spaces?

Learning Studio

Hope, Dignity, and Self-Esteem

CAREFUL AND WELL DESIGNED STORAGE

Safety, Security and Privacy

SPACE OF REFUGE IN CLASSROOMS

Peace of Mind

SEATING INTEGRATED INTO WINDOWS

Safety, Security and Privacy

SPACE OF REFUGE IN CLASSROOMS

Empowerment and Personal Control

OPERABLE WINDOWS

Hope, Dignity, and Self-Esteem

CAREFUL AND WELL DESIGNED STORAGE

Joy, Beauty and Meaning

COOL COLOR PALETTE SCHEMES

Empowerment and Personal Control

SPACE FOR GROWING PLANTS / GREENHOUSES

Connection and Community

TAILORED COMMUNITY SPACES

Peace of Mind

SOFT FORMS

Empowerment and Personal Control

PINUP SPACE FOR PERSONALIZATION

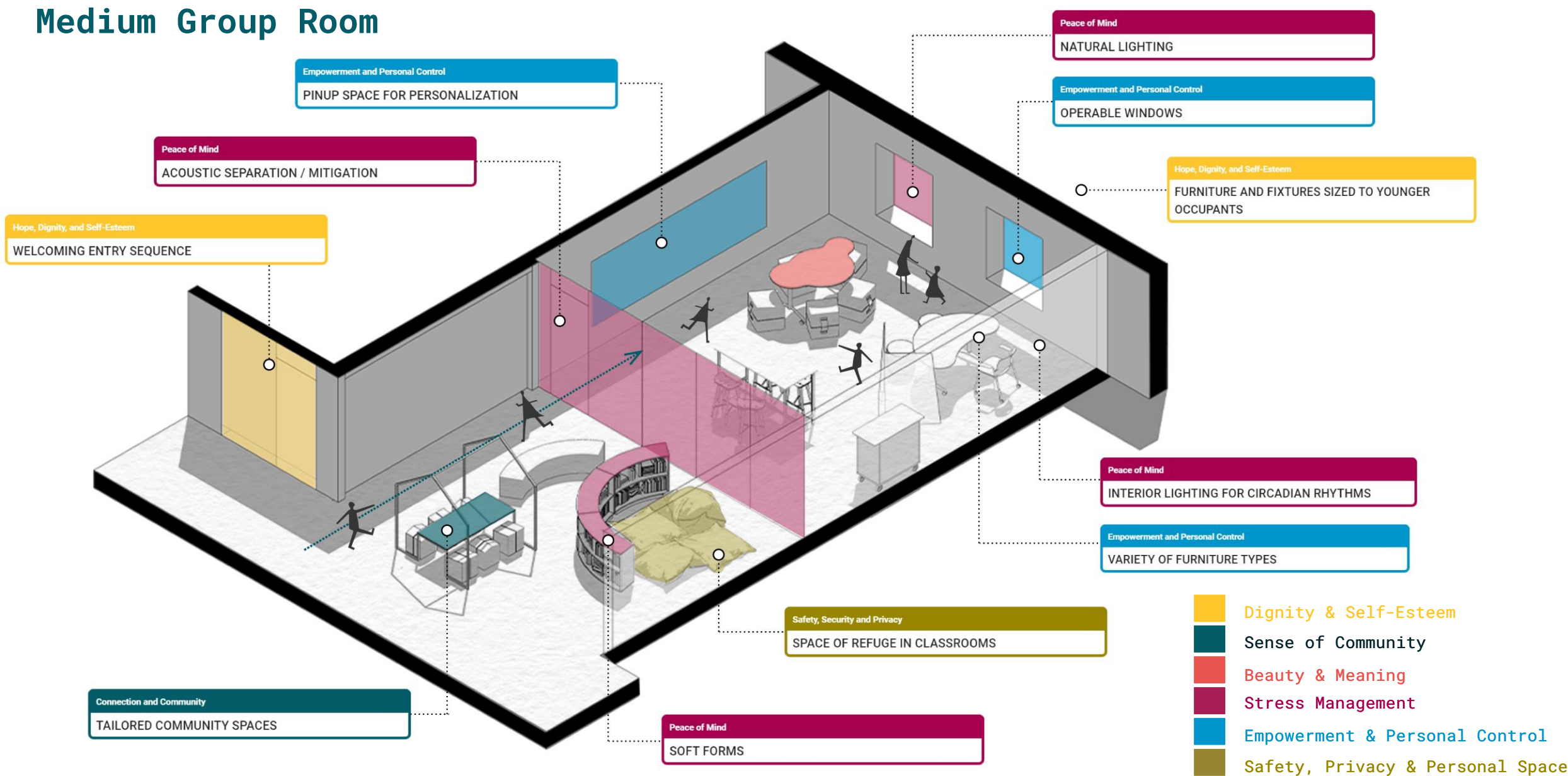
Peace of Mind

INTERIOR LIGHTING FOR CIRCADIAN RHYTHMS

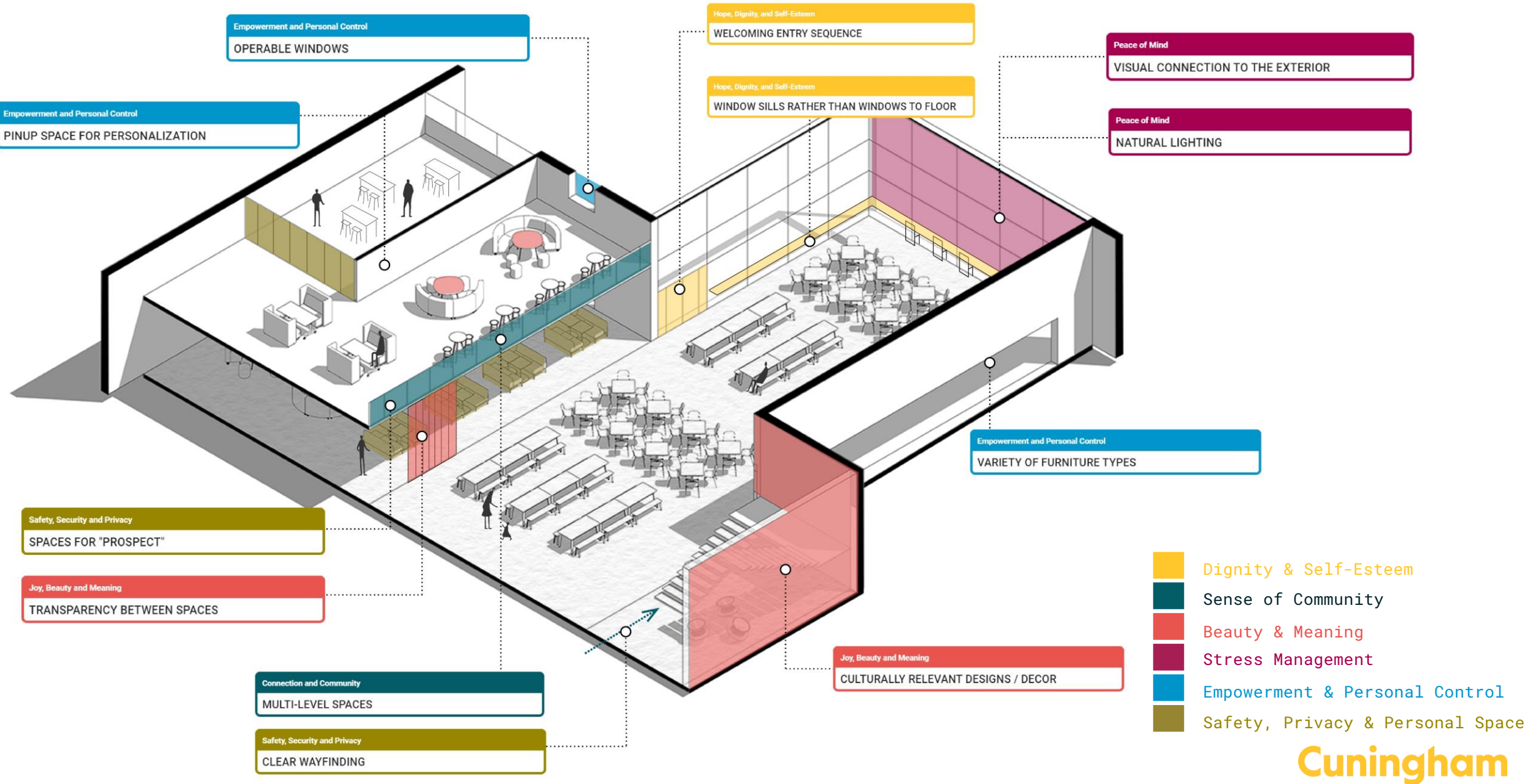
- Dignity & Self-Esteem
- Sense of Community
- Beauty & Meaning
- Stress Management
- Empowerment & Personal Control
- Safety, Privacy & Personal Space

Cunningham

Medium Group Room



Lunchroom Commons



Beauty and Meaning
NATURAL LIGHT INTO LEARNING SPACES

Security, Privacy & Personal Space
SPACES FOR "PROSPECT"

Sense of Community
CONVERSATION PIECES

Stress Management
AUTHENTIC CONSTRUCTION MATERIALS

Sense of Community
COMMUNITY RESOURCES

Empowerment & Personal Control
SPACES THAT ENCOURAGE MOVEMENT AND PLAY



Security, Privacy & Personal Space
SCREENED BOUNDARIES

Security, Privacy & Personal Space
EXTERIOR AWNINGS / SHELTERED SPACES

Security, Privacy & Personal Space
INTENTIONAL SIGHTLINES FROM INTERIOR TO MAIN ENTRY

Sense of Community
DIRECT CONNECTIONS TO THE EXTERIOR

Dignity and Self Esteem
WELCOMING ENTRY SEQUENCE

Beauty and Meaning
NATIVE LANDSCAPES

Beauty and Meaning
NATURE WALKS AND LEARNING TRAILS



Stress Management
NATURAL LIGHTING AND VIEWS

Stress Management
LOW VOC/ODOR MATERIALS
AND PRODUCTS

Stress Management
LOWER VOLUME SPACE NEAR
HIGH VOLUME ACTIVITY SPACES

Security, Privacy & Personal Space
CLEAR WAYFINDING

Stress Management
RECESSED BENCHES

Beauty and Meaning
NATURAL AND AUTHENTIC
MATERIALS

Security, Privacy & Personal Space
EASILY CLEANABLE MATERIALS

Beauty and Meaning
TRANSPARENCY TO SOCIAL
SPACES

Beauty and Meaning
3D DISPLAY

Sense of Community
INTERACTIVE CONVERSATION
PIECES

Empowerment & Personal Control
SPACES THAT ENCOURAGE
MOVEMENT AND PLAY

Dignity and Self Esteem
WELCOMING ENTRY SEQUENCE

Dignity and Self Esteem
EQUITABLE ACCESSIBILITY

Stress Management
TRANSITION ZONES BETWEEN
SPACES



Stress Management
ACOUSTIC SEPARATION /
MITIGATION

Security, Privacy & Personal Space
SPACES FOR "PROSPECT"

Beauty and Meaning
TRANSPARENCY BETWEEN
SPACES

Dignity and Self Esteem
EQUITABLE ACCESSIBILITY

Beauty and Meaning
WOOD FURNITURE FOR TACTILE
AND VISUAL COMFORT

Empowerment & Personal Control
SPACES THAT ENCOURAGE
MOVEMENT AND PLAY

Sense of Community
PRIMARY SOCIAL SPACES
VISIBLE AND ACCESSIBLE FROM
MAIN ENTRY

Sense of Community
MULTI-LEVEL SPACES

Beauty and Meaning
COOL / SOOTHING COLOR
PALETTE

Sense of Community
COLLABORATION SPACE

Beauty and Meaning
NATURAL OR SOFT MATERIALS

Stress Management
SOFT FORMS

Beauty and Meaning
MEANINGFUL DESIGNS AND
PATTERNS

Legend

Interior Spaces

- 1 Lily Pad Creek
- 2 Motor Room
- 3 Early Childhood Family Education
- 4 PK
- 5 Commons
- 6 Kindergarten
- 7 Indoor Play
- 8 Community Hub
- 9 Admin

Exterior Spaces

- 1 Playground
- 2 Garden
- 3 Learning Creek
- 4 Outdoor Classroom
- 5 Rain Garden
- 6 Vehicle Drop Off
- 7 Mindfulness Courtyard
- 8 Cistern
- 9 Main Entry

LEVEL 1

0' 25' 50' 100'



Legend

Interior Spaces

- 1 Salmon Creek
- 2 Media
- 3 Maker space
- 4 Art
- 5 Science
- 6 1st Grade
- 7 2nd Grade
- 8 3rd Grade
- 9 4th Grade
- 10 5th Grade
- 11 Student Services

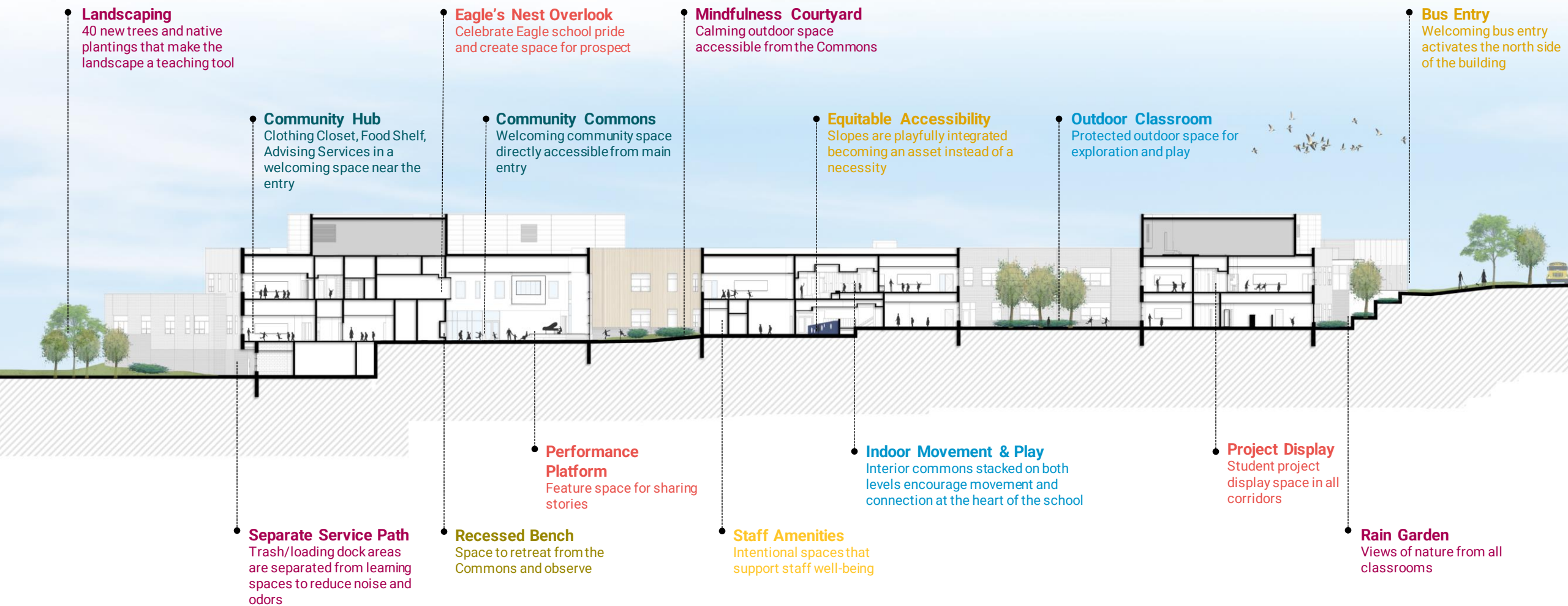
Exterior Spaces

- 1 Play Field
- 2 Bus Drop Off
- 3 Bus Entry
- 4 Community Table
- 5 Native Prairie Meandering Trail
- 6 Bus Entry
- 7 Rain Garden

LEVEL 2

0' 25' 50' 100'





Landscaping

40 new trees and native plantings that make the landscape a teaching tool

Community Hub

Clothing Closet, Food Shelf, Advising Services in a welcoming space near the entry

Eagle's Nest Overlook

Celebrate Eagle school pride and create space for prospect

Community Commons

Welcoming community space directly accessible from main entry

Mindfulness Courtyard

Calming outdoor space accessible from the Commons

Equitable Accessibility

Slopes are playfully integrated becoming an asset instead of a necessity

Outdoor Classroom

Protected outdoor space for exploration and play

Bus Entry

Welcoming bus entry activates the north side of the building

Separate Service Path

Trash/loading dock areas are separated from learning spaces to reduce noise and odors

Recessed Bench

Space to retreat from the Commons and observe

Performance Platform

Feature space for sharing stories

Staff Amenities

Intentional spaces that support staff well-being

Indoor Movement & Play

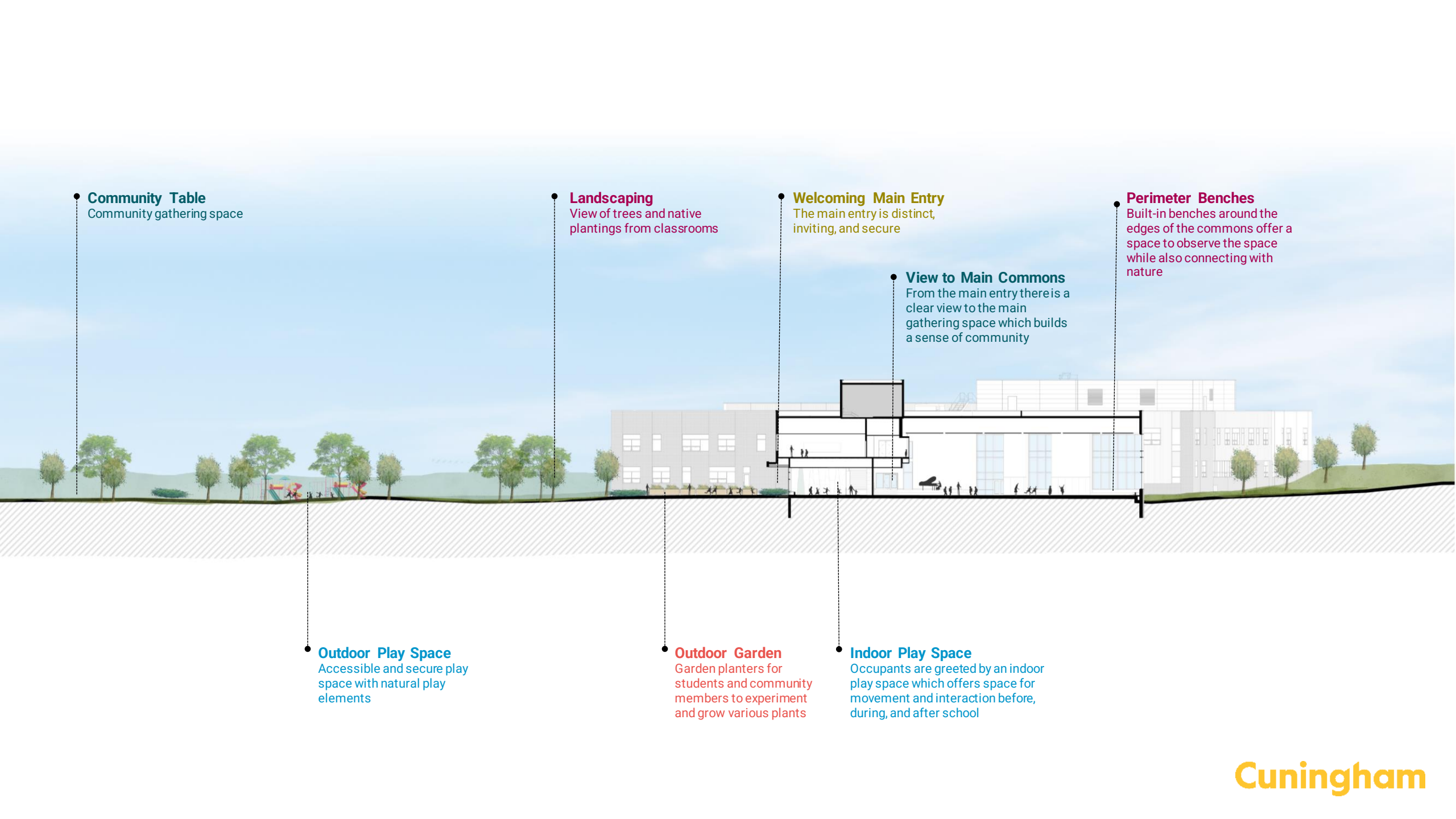
Interior commons stacked on both levels encourage movement and connection at the heart of the school

Project Display

Student project display space in all corridors

Rain Garden

Views of nature from all classrooms



● **Community Table**
Community gathering space

● **Landscaping**
View of trees and native plantings from classrooms

● **Welcoming Main Entry**
The main entry is distinct, inviting, and secure

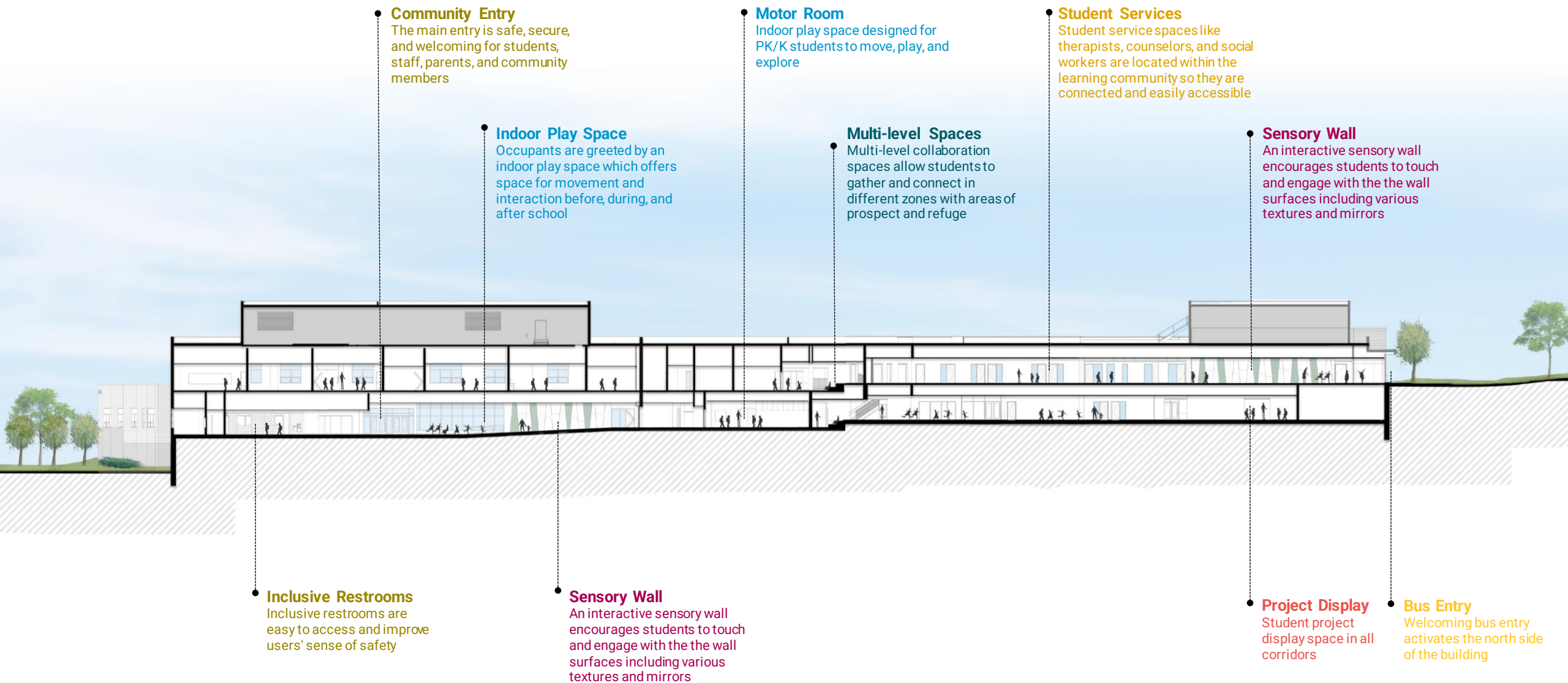
● **Perimeter Benches**
Built-in benches around the edges of the commons offer a space to observe the space while also connecting with nature

● **View to Main Commons**
From the main entry there is a clear view to the main gathering space which builds a sense of community

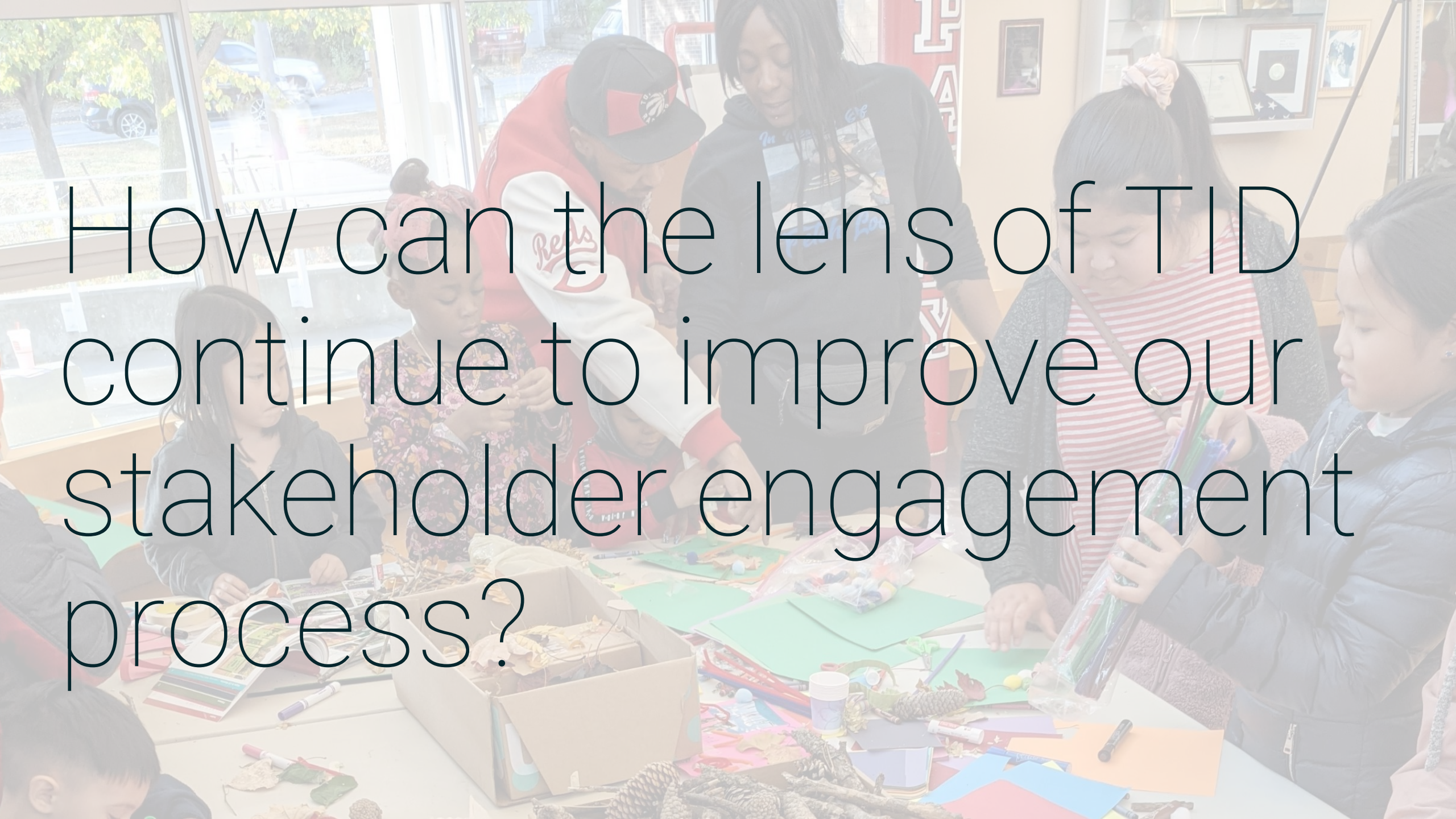
● **Outdoor Play Space**
Accessible and secure play space with natural play elements

● **Outdoor Garden**
Garden planters for students and community members to experiment and grow various plants

● **Indoor Play Space**
Occupants are greeted by an indoor play space which offers space for movement and interaction before, during, and after school



What's Next?



How can the lens of TID continue to improve our stakeholder engagement process?

Potential TID Strategies Inform Workshop Questions

SOCIAL SPACES VISIBLE AND ACCESSIBLE FROM MAIN ENTRY

When occupants enter a building and see social interaction happening, there can be a greater sense of belonging and community.

CONVERSATION PIECES

Unique and meaningful design elements or artwork can serve as conversation pieces for occupants to connect and build a sense of community and shared identity.

TAILORED COMMUNITY SPACES

Work with the community to understand what types of activities and events they want to be a part of and design intentional spaces around them.

COLLABORATION SPACE

Provide spaces that encourage group interaction and collaboration. Flexible furniture can be arranged to accommodate a range of group sizes and activities.

CENTRALIZED CHARGING STATION

Locating charging stations in the center of spaces instead of only at the perimeter encourages occupants to mingle and connect to others while using o charging devices.

EQUITABLE AND INTERACTIVE TECHNOLOGY

Ensure that all occupants can see what is being presented or shared. This may mean locating supplemental screens around the space for ease of viewing. Interactive technology can allow occupants to engage and collaborate together, even with people not in the room.

EASILY CLEANABLE MATERIALS

Materials that are easy to clean (and easy to tell that they are clean), such as polyurethane fabric, plastic laminate and solid surface, provide peace of mind that dust, and other debris are not hiding.

CLEAR WAYFINDING

Large educational facilities can have complex floorplans that are hard to navigate. Striving for simple layouts and clear hierarchy of space can make a building more navigable and less intimidating.

SCREENED BOUNDARY CONDITIONS

Screened boundaries allow for passive observation and connection between spaces, while filtering distraction from high activity areas. A screened boundary can create the sense of enclosure while avoiding a sense of constriction from smaller enclosed space.

SIGHTLINES FOR PASSIVE OBSERVATION

Use openness and transparency to allow for passive observation rather than relying on an authority figure. This can make the space feel less surveilled while also keeping eyes on the space for safety.

RETREAT SPACES

Provide spaces that allow occupants to retreat from the stresses of the main space and unwind. This may be an enclosed piece of furniture, a built-in nook, or a small focus room.

INCLUSIVE RESTROOM DESIGNS

Inclusive restrooms embrace the ethics of universal design and provide a private space to recover from stress or triggering events. They serve all occupants equally.

OPERABLE WINDOWS

Provides occupants with a sense of control over the airflow, temperature, humidity and sound in the space.

INDOOR SPACES THAT ENCOURAGE MOVEMENT AND PLAY

Create durable, safe and fun places that spark movement and play. Floor patterns, dynamic lighting, and engaging wall graphics may promote a sense of play.

ZONED AND DIMMABLE LIGHTING

Spaces with different lighting zones allow occupants to change how defined areas are lit and dimmable controls give occupants the ability to modify the brightness to match how the space is being used and how people are feeling in the space.

TOUCH DOWN SPACES

Inspiring, engaging spaces for occupants to transition and connect. Recessed benches or flexible furniture may offer this opportunity.

VARIETY OF FURNITURE TYPES AND ZONES

Provide furniture options with varying degrees of tactility, mobility, and posture. Arrange different types of furniture into zones to give occupants choice of where they want to be.

BRING PLANTS INSIDE

Planting, watering and caring for plants can be therapeutic. In climates with an extended winter season, greenhouses and indoor plants can be used to extend these benefits through the winter.

TRANSITION ZONES BETWEEN SPACES

Create natural and gentle experiences of threshold/transition between spaces of different uses, between interior and exterior, and different levels of social activity.

CURVED FURNITURE FORMS

Soft and organic forms in furniture and finishes can make a space feel more comfortable and reduce stress for occupants.

ACOUSTIC SEPARATION / MITIGATION

Use acoustic separation, like fabric covered space dividers and high STC walls, and mitigation, like sound masking, to reduce unnecessary or overwhelming ambient noise.

HEATED FLOORS

Heated floors provide comfort for learners who occupy the floor space during activities and learning. They can also make spaces feel more welcoming.

QUIET SYSTEMS AND LIGHTS

Equipment and lights that create a buzzing, clicking or subtle sound can be distracting and upsetting. Select quiet fixtures and design acoustic separation from noisy building systems.

LIGHTING FOR CIRCADIAN RHYTHMS

Include lighting that changes intensity and color over the course of the day to correspond to people's natural circadian rhythms. A healthy circadian rhythm is associated with improved long-term health and promotes better sleep habits.

WELCOMING ENTRY SEQUENCE

The entry to the space should be well-lit, warm and welcoming. Natural light, comfortable furniture, and clear wayfinding help people feel like they belong.

CAREFUL AND WELL DESIGNED STORAGE

Storage designed to reduce clutter and visual complexity can improve occupant well being, while allowing occupants to feel agency over their spaces and keep them tidy. Well designed storage can double as display to enrich the character of the space.

FURNITURE OPTIONS FOR ALL BODY TYPES

Intermix furniture in a range of sizes and postures, including bariatric and sensory options, allowing occupants to select what feels more supportive and comfortable to them.

ACHIEVEMENT DISPLAY AREA

Design intentional spaces for 2D, 3D, and digital display.

EQUITABLE ACCESSIBILITY

Sloped floors, ramps and elevators which are centrally located and near stairs create a more equitable path of travel for all occupants.

INDIRECT LIGHTING NEAR MIRRORS

Indirect side lighting creates a more attractive lighting condition when looking in the mirror, helping to support self-image.

CULTURALLY RELEVANT DESIGNS

Work with the community to understand the stories that occupants want to see told in the building.

REDUCE VISUAL COMPLEXITY

Irregular, cluttered, and highly contrasting spaces can be confusing and disorienting. Minimize the interior palette to contain only what is necessary to serve the building and tell the story.

NATURE WALKS AND LEARNING TRAILS

Accessible pathways through natural surroundings can support sense of place and teach occupants about the natural ecosystem.

NATURAL AND TEXTURED MATERIALS

Materials like wood, stone, and textured fabric add warmth, authenticity, and softness to the space.

MEANINGFUL COLOR PALETTES

Work with the community to understand what colors are most meaningful and use them to add character to the space.

STORYTELLING AND DISPLAY

Intentional spaces for storytelling and changeable displays infuse the space with identity and meaning.

What makes you feel inspired?

What does a calming space look like to you?

What types of spaces would the community like to see?

What are you proud of that should be celebrated in your school?

Where do you feel like you belong?

What makes you feel comfortable in a space?

What makes you feel inspired?

Connection
to Nature

Seeing my
work on
display

Getting to
make things

Feeling
like I'm
part of the
greater
community

Walking
into a
space where
it feels
like I
belong

Spaces
where I can
focus and
work on my
own

What might this look like?

Connection
to Nature



Independence



Setting my
own path

Spaces to
move



Walking into a
space where it
feels like I
belong



Getting to
make things

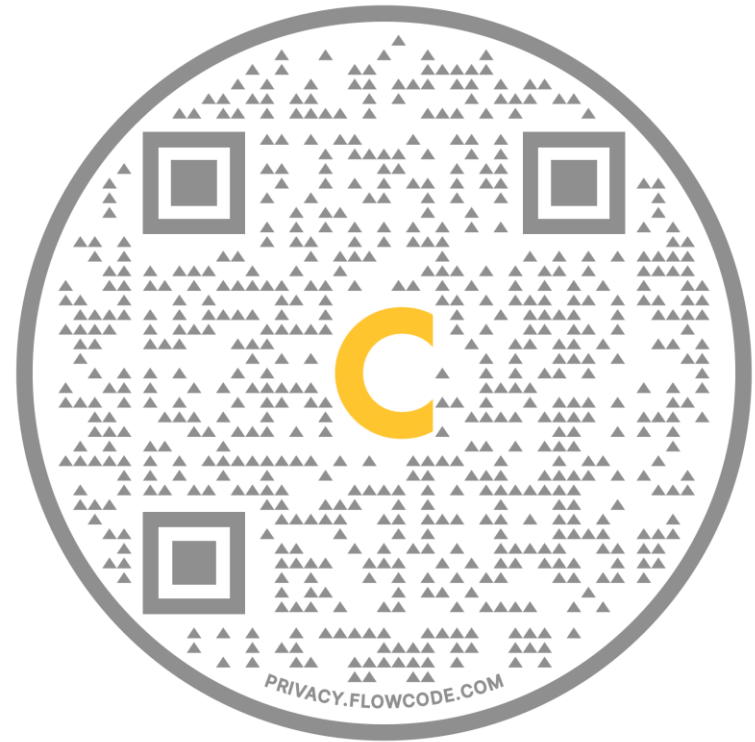
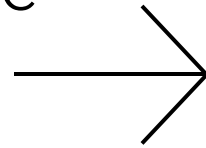


Feeling like I'm
part of the greater
community



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We are in the process of curating
a set of strategies. What Trauma
Informed Design strategies come
to mind for you?



Lessons Learned...so far

- Trauma Informed Design is not one-size-fits-all
- The 6 Principles can be a guide at all stages of the design process
- Designing through the lens of Trauma Informed Design can benefit all users of the space and this approach may be applied across all markets



Thank you!

Q&A



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EDspaces

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Charlotte, NC | November 7-9, 2023

Thank You!

Please scan the QR code to
provide session feedback.



SCAN ME

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