



Hello!



**Hillery Clark**  
Director of Early Learning  
SHORELINE PUBLIC SCHOOLS

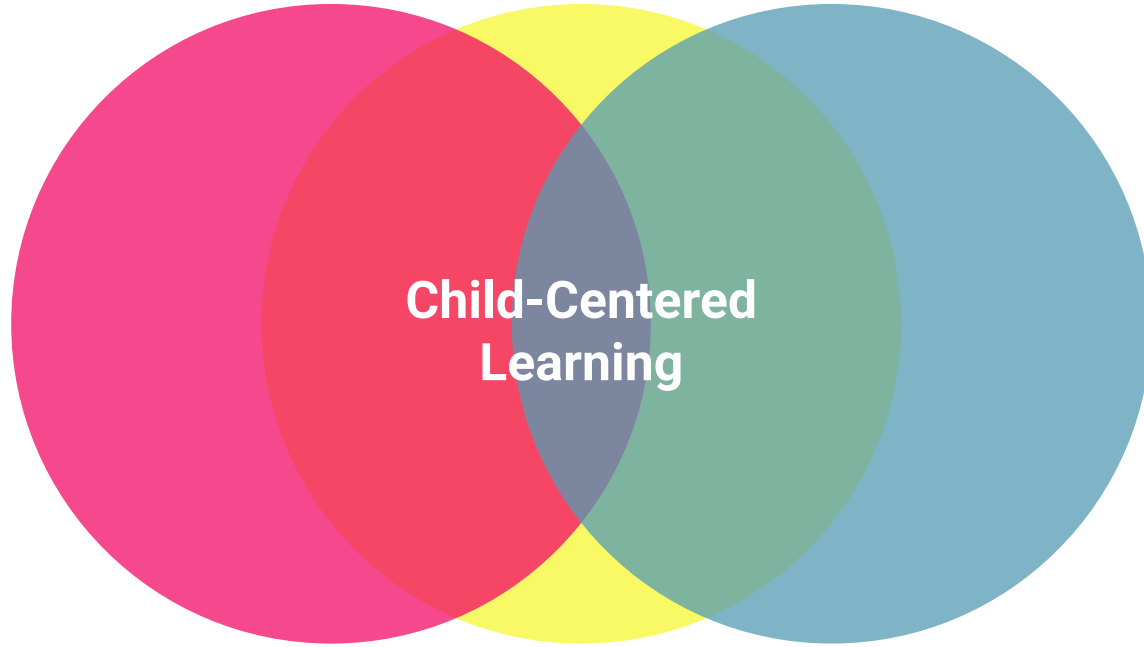


**Clayton Beaudoin**  
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SITE WORKSHOP



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Associate, AIA, LEED BD+C  
MAHLUM ARCHITECTS

**Physical, Social &  
Emotional Development**



**Program Model**

**Facility**

**Child-Centered  
Learning**



# Feel & Spirit





## Feel & Spirit



# Sensory Experience





# Design for all Learners















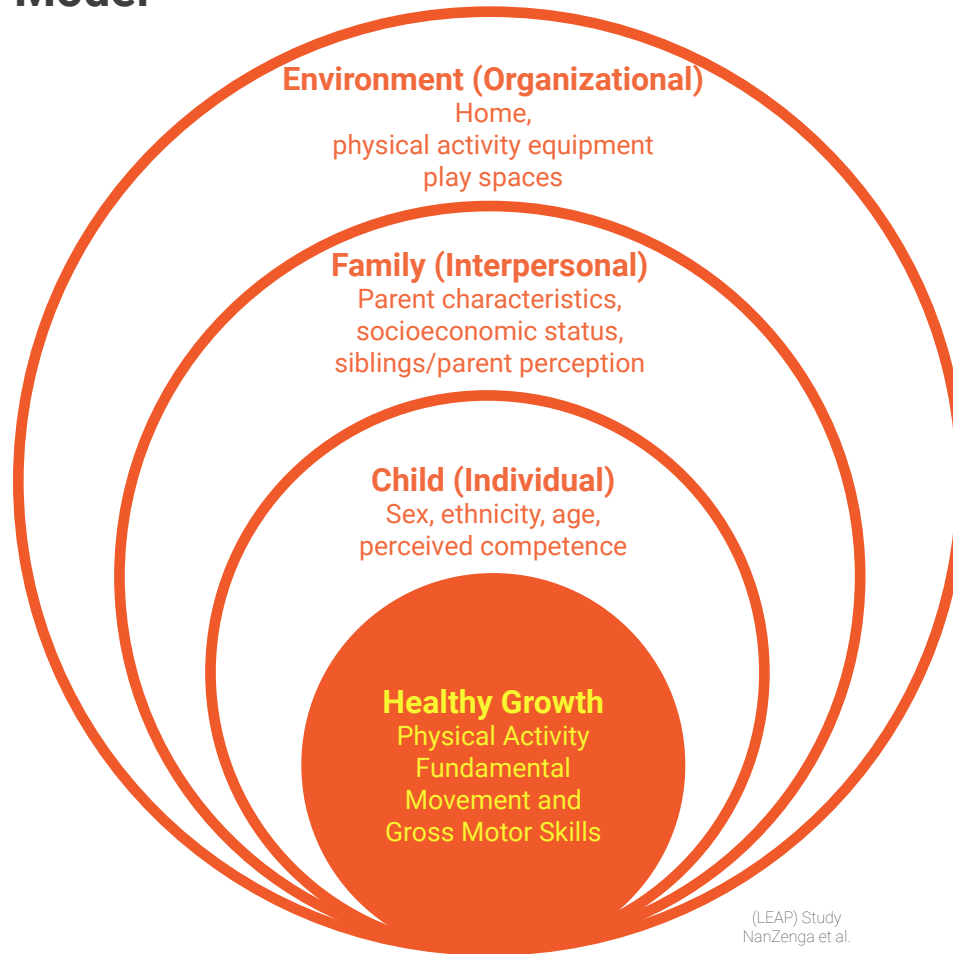




# Gross Motor Development



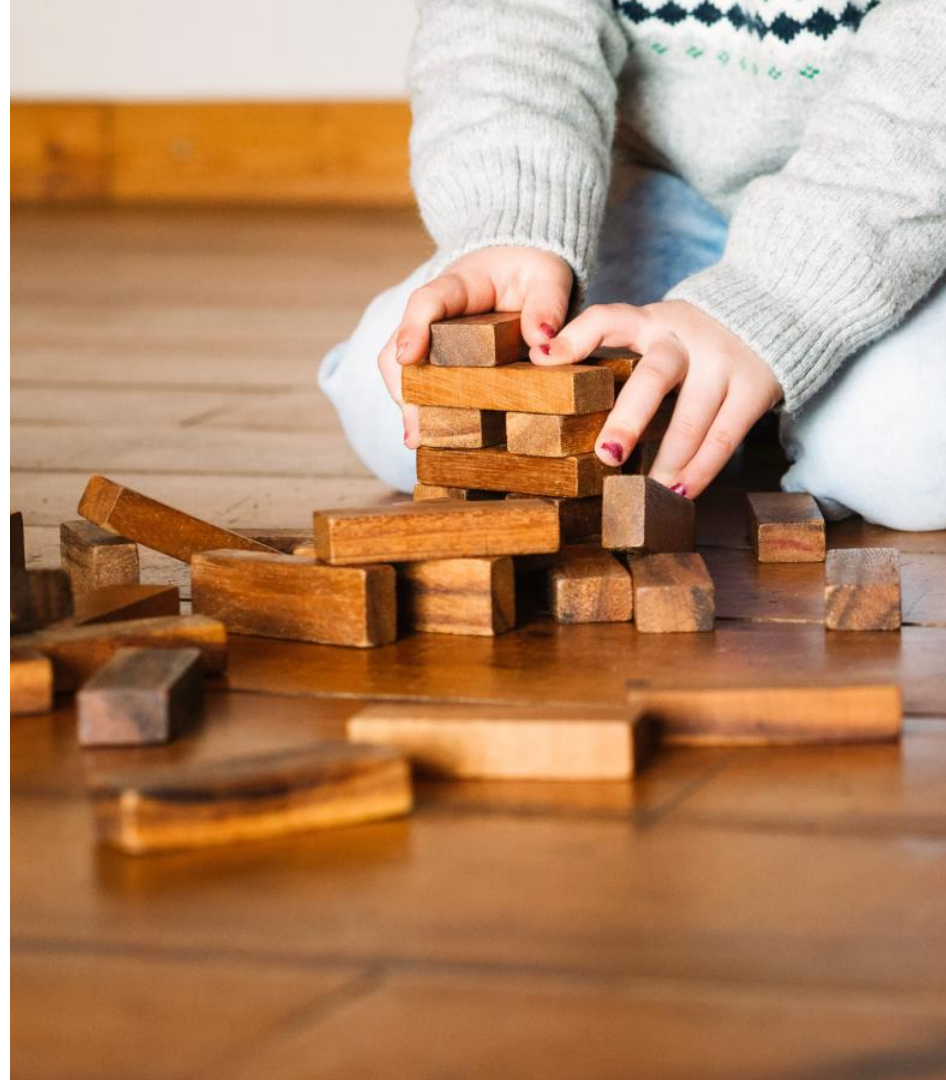
# Socio-Ecological Model





## Gross Motor Skills

- Only 50% of children have been shown to demonstrate competency in a broad range of motor skills
- Motor incompetent children suffer from emotional and cognitive issues later in life, underscoring the importance of gross motor skills, particularly in lower income children
- Gross motor skills have been shown to be related to mathematics skills development



## Physical Activity

- Lowers cortisol reactivity, lowering anxiety, improving classroom behavior
- Improves attention span and working memory by altering neurochemicals
- Enhances object control skills which leads to improved attention and cognitive development
- Object control skills improve in situations with fast adaptation to changing situations. Object control skills improve executive function such as goal formation and effective execution of goal-directed plans



## Neuroscience Research

- Motor and cognition use the same brain structures, such as cerebellum and pre-frontal cortex and tend to have a similar development timetable.
- fMRI Neuromimaging studies have established that resting state networks are a mechanism in the relation between cardiovascular fitness and gross motor skills, which are associated with enhanced performance in neurocognitive functions. (Information processing and motor response)





## Infants

As infants age they develop an awareness of others and move from solitary play to parallel play where they watch others and then try to mimic their activity.

- Soft crawling surfaces
- Warm materials
- Slight changes in levels
- A variety of textures
- Interactive devices that provide interesting sight, sound, scents, and surfaces



## Toddlers

- Environments increase the challenges such as steeper slopes, higher steps, upper arm pulls etc.
- Discovering the difference between self from other, are often not aware of how their body impacts others around them
- Learning how to move and balance in space as they take on new explorations such as fast walking, walking backwards, sideways and running.
- Establishing connection with others



## Preschoolers

- Preschoolers benefit from larger areas in which to run, jump, climb, lift, throw, push and pull etc.
- Participate in cooperative activities from which they are refining their interpersonal skills.



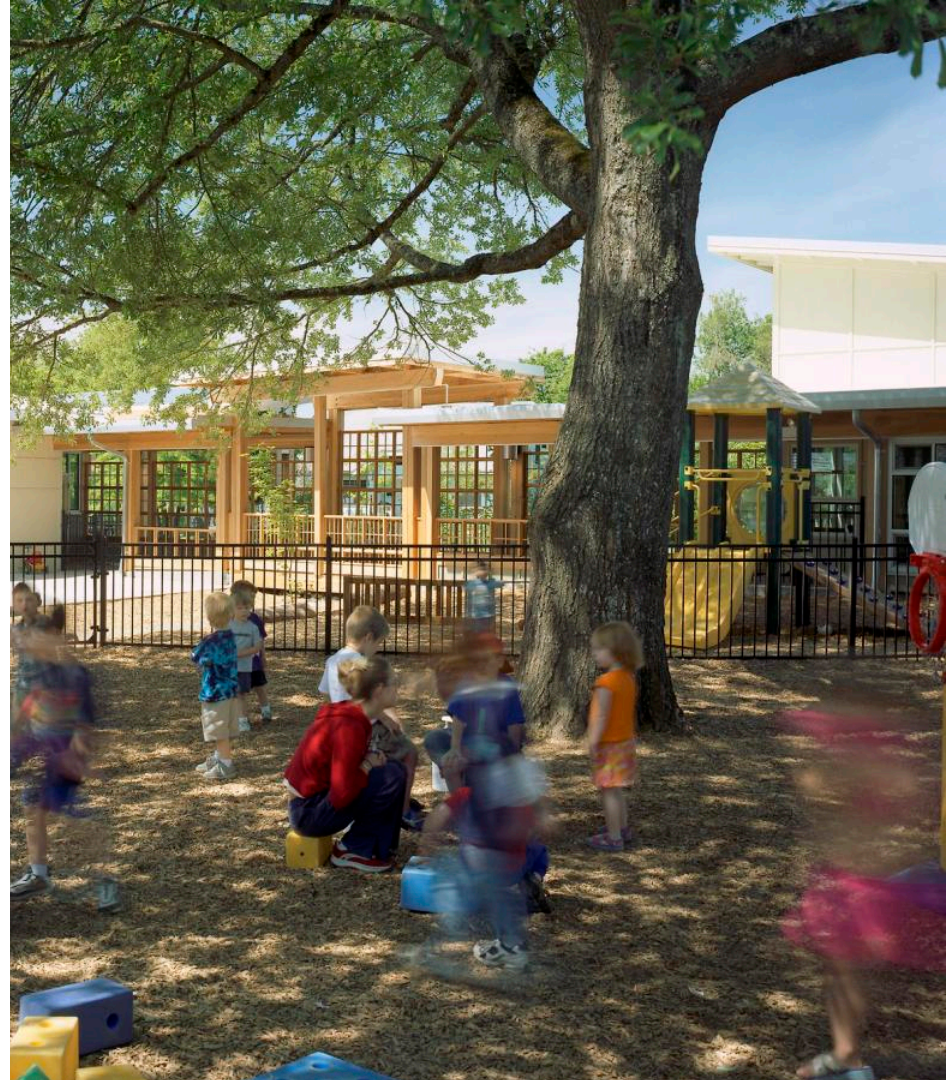


Biophilia



## Biophilia and Science

- Neuroscience indicates that the brain is sensitive to near colinear contours found in nature which and visual patterns that are easy to detect relax the brain providing mental capacity for more demanding neurocognitive function
- Nature creates soft fascination which calms the prefrontal cortex, giving mental pause for better cognition. Recent fMRI imaging studies confirm these benefits











Average Hours of Daylight/Week

43 hrs





Average Hours of Daylight/Week

43 hrs

Average Hours at Childcare /Week 24 hrs





## Biophilic Design

- Visual, haptic and physiological relationship with natural systems- air, water, light, vegetation.
- Use natural materials
- Thoughtful use of daylighting
- Views/access to the outside
- Patterns/shapes that mimic nature
- Connection to place







The image shows the exterior of a modern, single-story building with a light-colored brick facade. A wide, light-colored concrete walkway leads from the foreground towards the building's entrance. To the left of the walkway, there are several large, smooth, light-colored rocks and some low-lying green plants. To the right, a young tree with green leaves is supported by a wooden stake. The building features a large glass entrance door and a large window to the right. The sky is a clear, bright blue. The text "Capitol Campus Childcare Center" is overlaid in a yellow, sans-serif font on the left side of the image.

# Capitol Campus Childcare Center

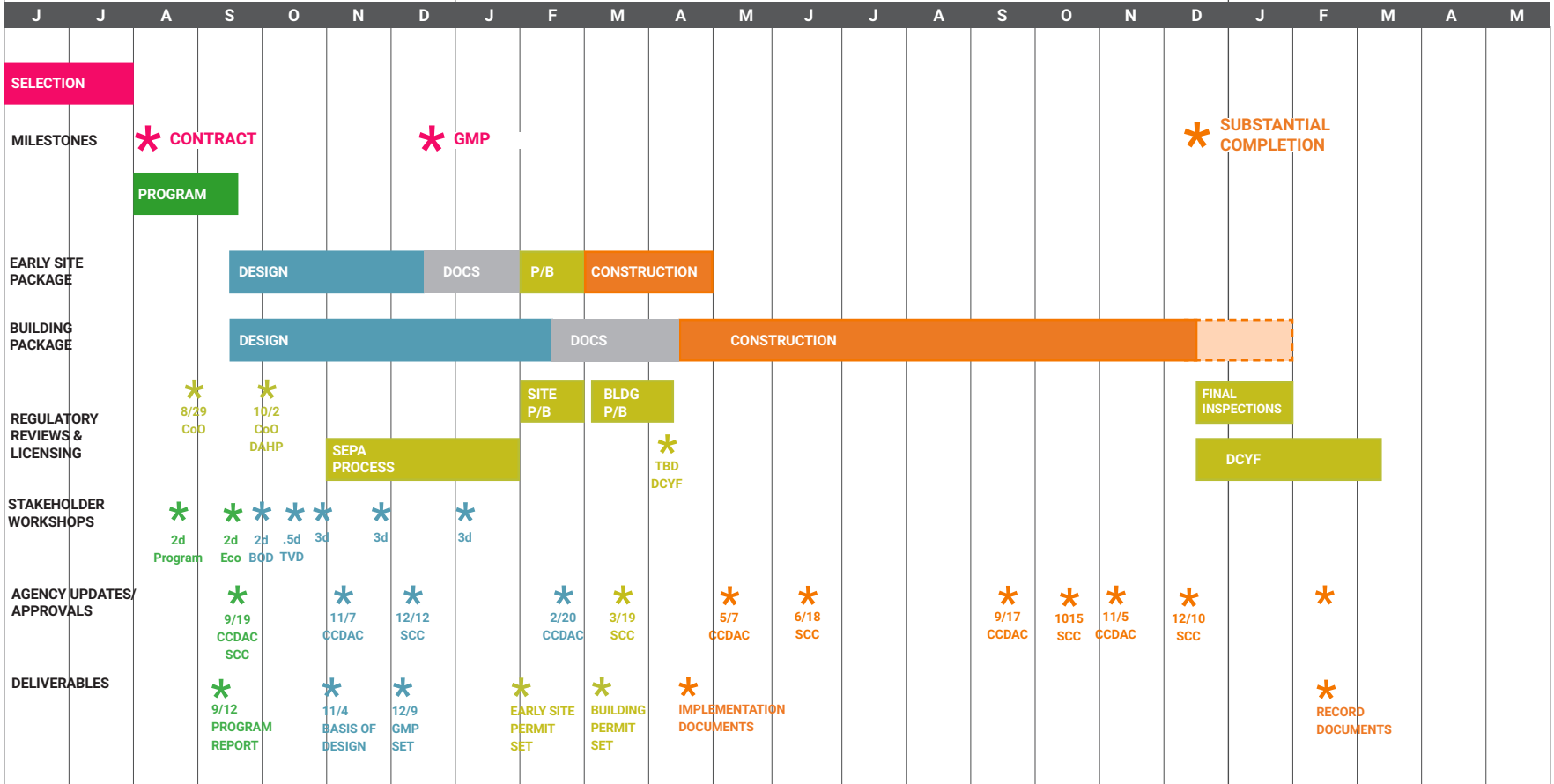




2019

2020

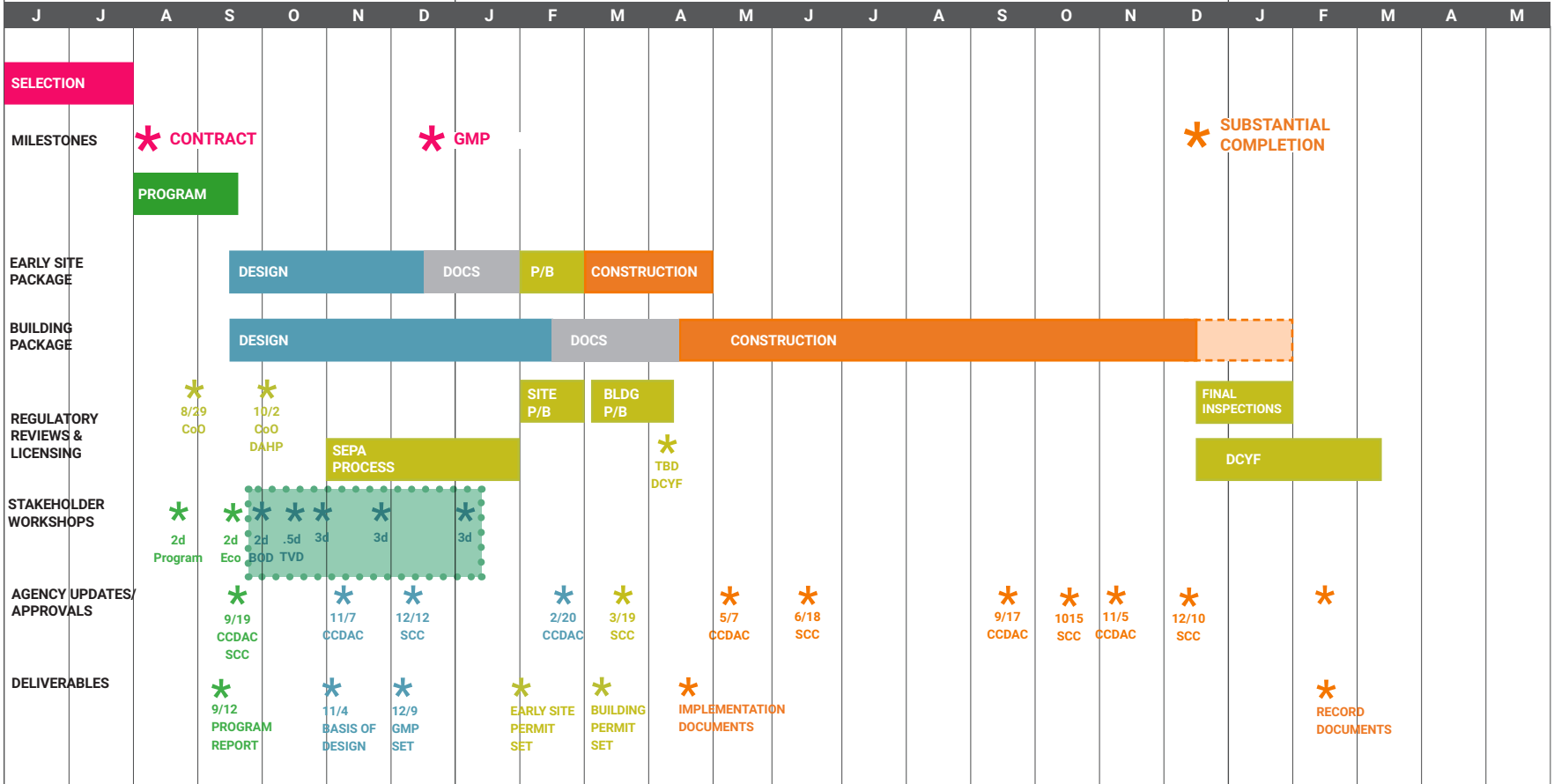
2021



2019

2020

2021





# You are an Capitol Campus Child.....



- :: What spaces would inspire you to learn?
- :: What spaces do you gravitate towards?
- :: What spaces make you feel comfortable?



- :: What spaces make you feel uncomfortable?
- :: What spaces make you anxious?
- :: What spaces would you avoid?







## This

- Foster Creativity and Joy
- Connected to Nature
- Bright, Airy, Child-scaled

## Not This

- Institutional
- Stark and Cold
- Too Big and Out of Scale



TOTAL	THIS					
3	3	Inviting	3	Thoughtful Use of Color		
			1	Calm & Comfortable		
3	1	Warm & Cozy		9	Foster Creativity & Joy	
					Facing Nature	
3	1	Balance Campus Context & Program	8	Connected to Nature	3	Appropriate Storage (size & type)
					1	Room to Move
5		Natural Light			2	Simple & Functional Form
					2	Maintainable Finishes
3	2	Flexibility				
4	1	Bright & Airy	4	Child-scaled		



















# Integrated Design Systems

- Passive Systems
- Natural Ventilation
- Enhanced Envelope
- Aspirational Net-Zero Energy Goal
- Mass Timber
- On-Site Stormwater Management
- Material Transparency
- Operator Flexibility and Empowerment




## STRATEGIES FOR THE BUILT ENVIRONMENT: MATERIALS / HEALTH

**MATERIALS / HEALTH**

COST: \$\$\$




**MASS TIMBER AND CROSS LAMINATED TIMBER (CLT)**

Mass timber is a structural type that uses thick wood columns, beams and panels to form the structure. CLT is a type of mass timber, with panels 4" or thicker made from wood that can be used as floors, walls or roofs.



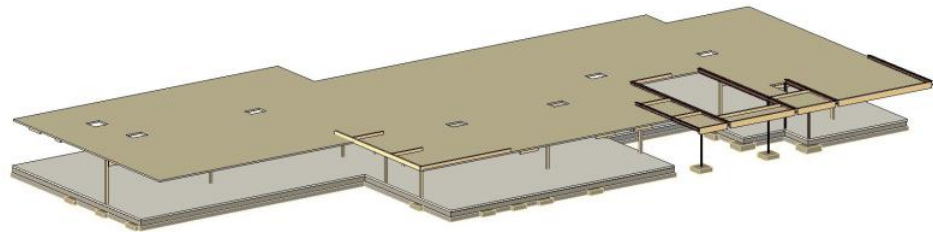
**DETAILS**

PROS	CONS	SYNERGIES	BASELINE
Is a beautiful, strong structural system that highlights the natural warm colors and texture of the material. The panels and timbers can be both local and sustainable. While the use of it is new, the technology and the installation are simple and fast.	There are only five regional suppliers of CLT, with two being in Washington State and contractors may be new to it. Costs of structure can be higher than a more traditional system.	Biophilic design is reflected in the structural material.	Wood or metal balloon frame at classrooms, steel structure at gathering spaces.



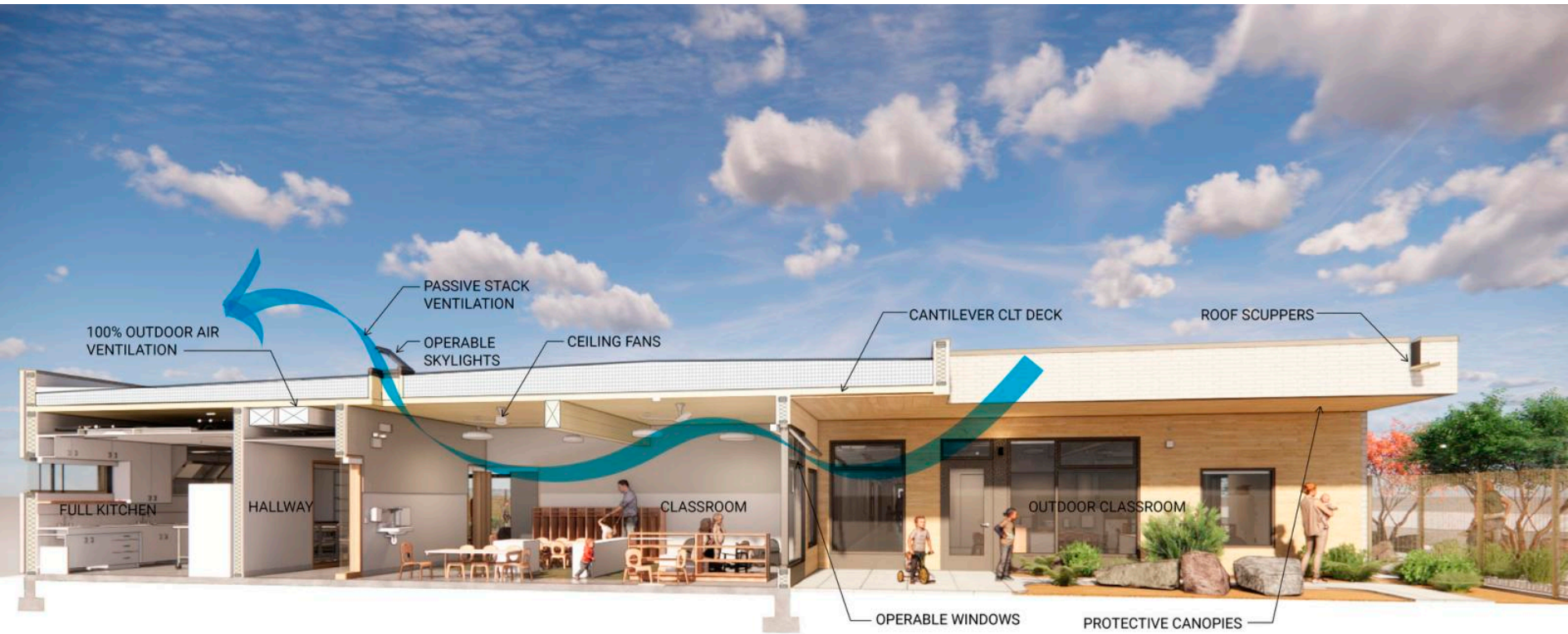




		Values								
Row Labels		Sum of Acidification Potential Total (kgSO2eq)	Sum of Eutrophication Potential Total (kgNeq)	Sum of Global Warming Potential Total (kgCO2eq)	Sum of Ozone Depletion Potential Total (CFC-11eq)	Sum of Smog Formation Potential Total (kgO3eq)	Sum of Primary Energy Demand Total (MJ)	Sum of Non-renewable Energy Demand Total (MJ)	Sum of Renewable Energy Demand Total (MJ)	Sum of Mass Total (kg)
	2019405-Arch-CCC-V20_Tally.rvt	315.80	32.32	78,087.80	8.30E-04	4,711.85	1,873,892.20	1,566,989.71	306,940.32	166,851.88
	2019405-Structural-CCC-V20_TallyWood.rvt	641.47	94.04	41,748.84	3.84E-03	7,104.57	1,467,275.03	816,086.28	650,470.10	427,288.76
All Wood Option	Grand Total	957.26	126.36	119,836.64	4.67E-03	11,816.42	3,341,167.23	2,383,075.99	957,410.41	594,140.64
All Steel Option	Steel	934.12	62.36	243,173.61	3.00E-03	13,772.28	3,802,284.66	3,516,546.20	286,499.57	594,571.29
	Change from all Wood option	1.02	2.03	0.49	1.55E+00	0.86	0.88	0.68	3.34	1.00
Steel with CLT Hybrid Option	Steel w CLT Roof	1,204.29	127.84	214,453.57	5.63E-03	15,048.00	4,286,593.69	3,492,110.16	794,209.71	637,554.47
	Change from all Wood option	0.79	0.99	0.56	8.29E-01	0.79	0.78	0.68	1.21	0.93

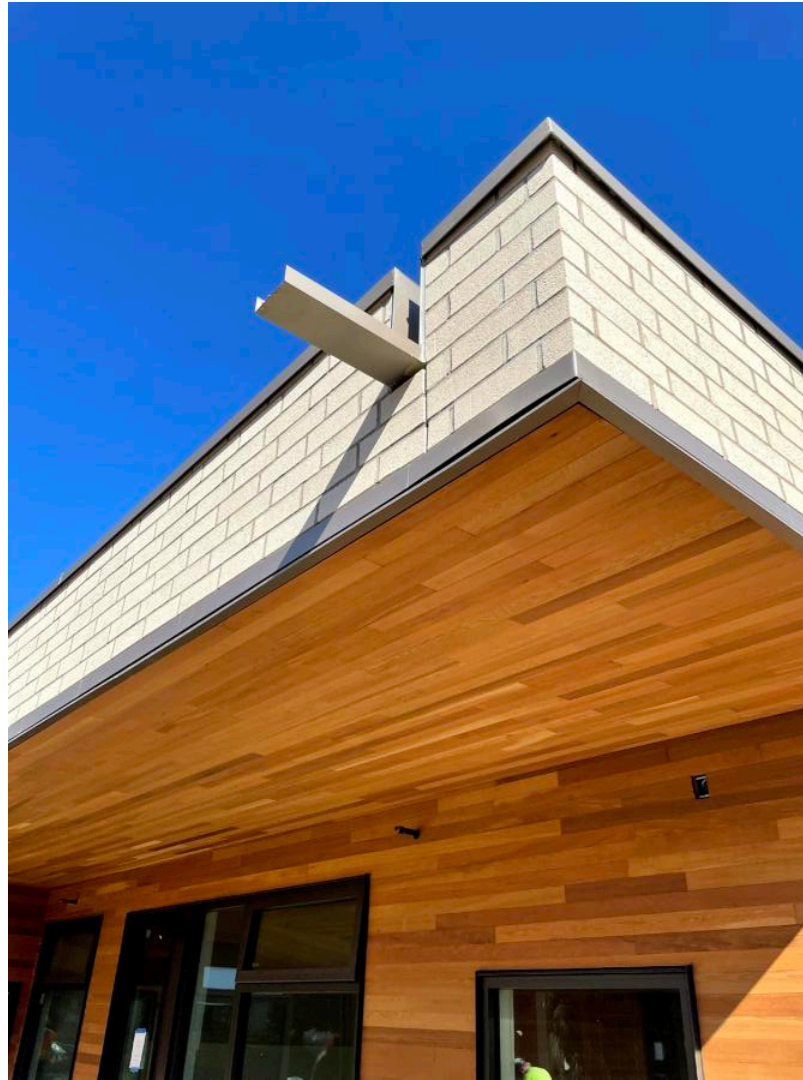








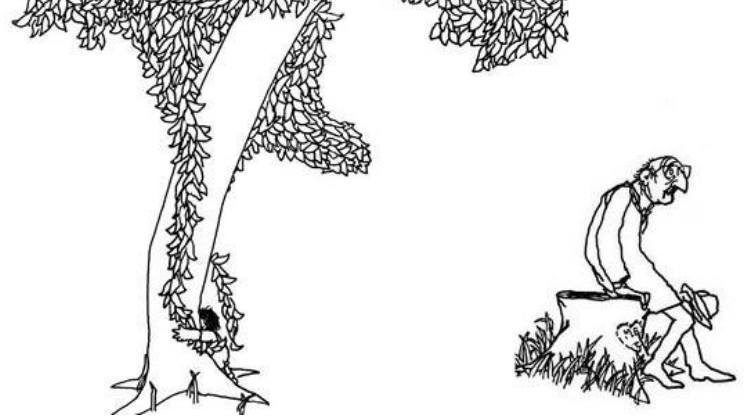
















The image shows an outdoor play area at the Edwin Pratt Early Learning Center. The play area is covered in wood chips and features several large, cut log stumps arranged in a path. A child is seen climbing one of the stumps. In the background, there are young trees and a building with large windows. The entire scene is overlaid with a red color filter. The text "Edwin Pratt Early Learning Center" is written in a yellow, sans-serif font across the middle of the image.

# Edwin Pratt Early Learning Center





# Foundational Questions

Use these lenses to evaluate the 4 sites you visit today.

## Early Childhood Environment Rating Scale (ECERS)

Where did you see a great **interest center** for:

Art

Reading

Blocks

Nature / Science

Dramatic Play

Manipulatives / Fine Motor

Describe examples of **spaces for privacy**. Where was

space set aside for one or two children to play, protected from intrusion by others. Was there more than one space available for privacy?

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## Personalization

Describe the center's efforts (instructionally, architecturally and/or with furnishings) at **personalizing** the environment. Locate and describe evidence of personalized spaces for children. How does the physical space promote strong **relationships** between teachers and children?

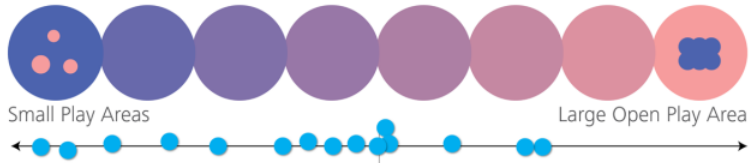
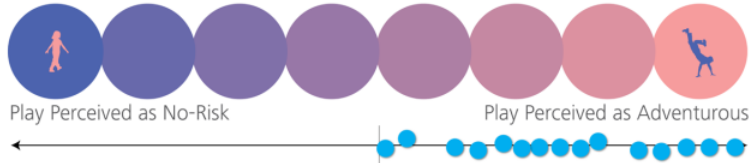
## Continuous Relationships

Describe the centers' efforts (instructionally and architecturally) to **positively impact** children, staff, parents and community. Where do meetings take place? Where do parents feel **welcome**? How do community members interact with the center?



# What **features** are most integral to outdoor play and learn?

Place one dot on each black line to indicate where you fall on the spectrum.



# Imagine the **Arrival Experience**...

Create a collage of the space as a group below using the images provided.

*We need a "Wow, come in" feature*

*for Community water (not drinkable) - adult workers*

*What kinds of Activity might happen in this space?*

*What do you not want?*

Children	Staff
24	3
20	2
19	2
10	4

**Bus Dropoff**

Parent Dropoff *waiting outside area of school*

1st Time Visitor

waiting for families (adults, kids, students)

parent conversations

small outdoor play space

**Wagons**

defined spaces per bus group

seating

covered area *with physical boundary between waiting area*

outdoor coat lockers

bathroom close by

parent map / tables *welcome board*

**Space shows expectations**

Community small gatherings

child bike path for community and peer pathways

Nice tables for tables, walkers, bikes

exercise for caregivers and socialization

**Qualities:**

Safe/Low risk play spaces

Clear directions/reservations

Wow factor

Safety from vehicles

welcoming to community

picnic tables, visible from path

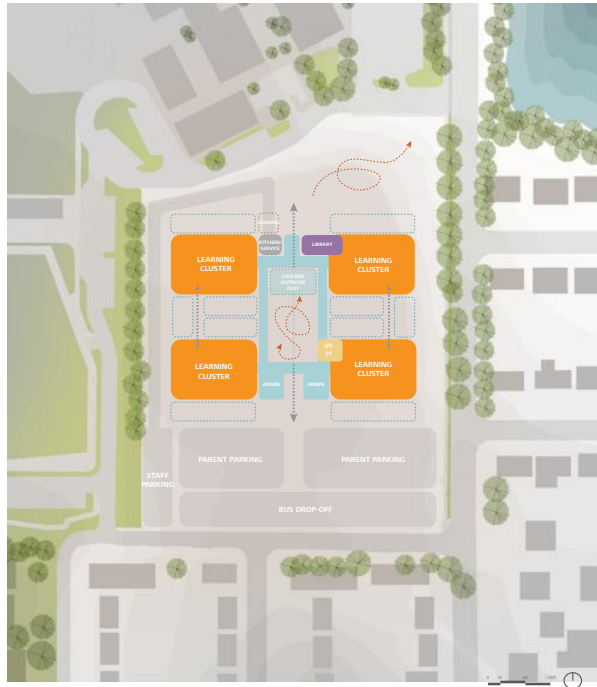
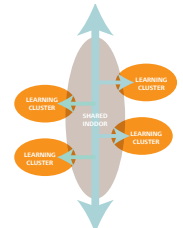
path

bike rack

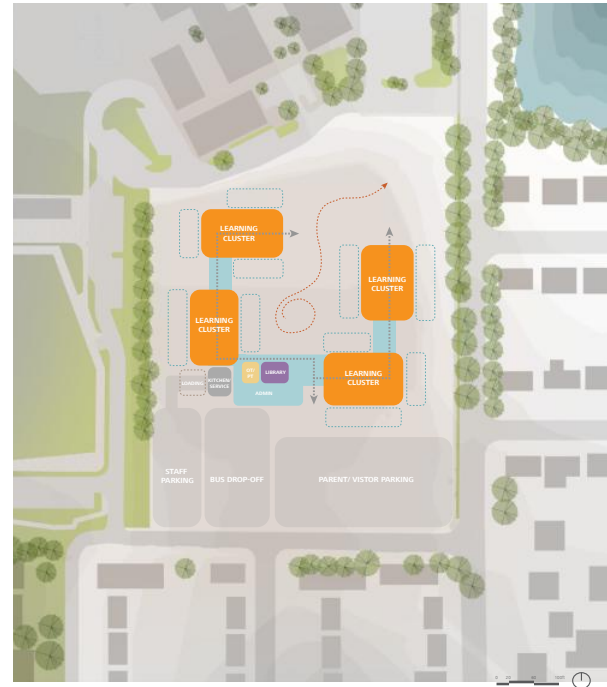
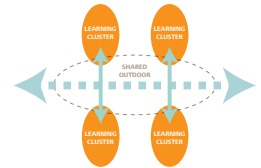
big pathway outside perimeter



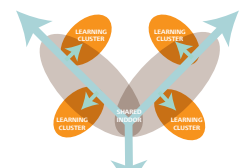
"HOPSCOTCH"



"FOUR SQUARE"



"JUMP ROPE"

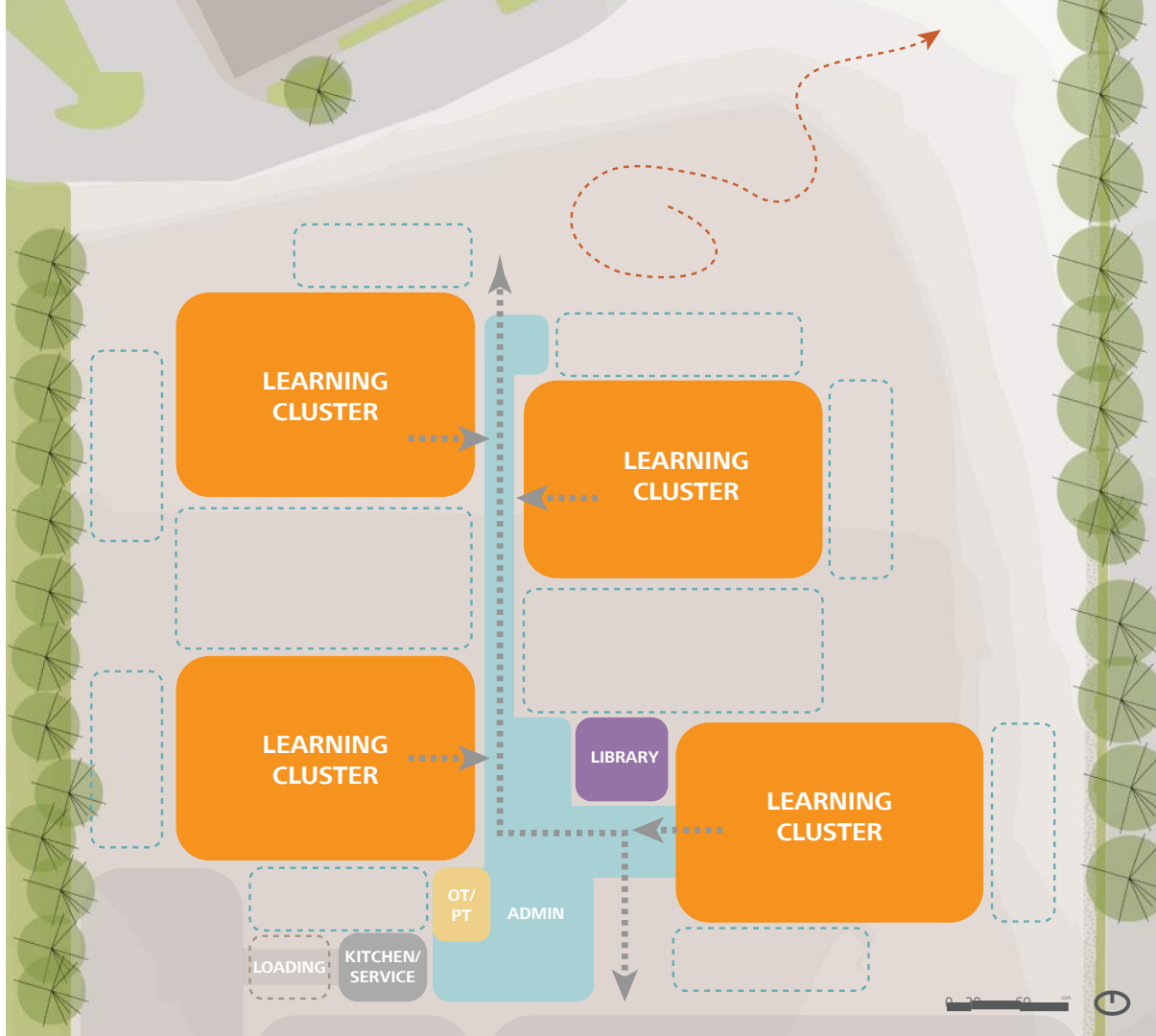




# JOURNEY MAPPING CHILD WITH SPECIAL NEEDS

## Hop Scotch

	WAKING UP/ GETTING READY	TRANSIT/ ARRIVAL	CIRCLE TIME	OUTDOOR TIME	INDOOR LARGE MUSCLE	NAPPING	EATING	TOILETING/ HYGIENE	Extended-day activity + SLP OT/PT ACTIVITIES	IEP ACTIVITIES	LIBRARY	AFTER SCHOOL EVENTS	DEPARTURE/ TRANSIT	HOME
ENVIRONMENTAL		How welcoming is his morning routine in school for families waiting or being to school? Natural paths lead to front - clear + fun		Coats, etc are easily accessible to outside + don't require all children to transition at same time (e.g. in classroom) Safe access to outdoors important bc may have less access to community parks for safety/escape reasons Not too huge to run away		N/A for the most part								Less access to nature due to safety issues
PHYSICAL		Smooth ramps + walkways. Barriers b/w street/driveways + waiting areas. Had staff students need to wash hands, eat breakfast, walk to bathroom again - maybe students all wait + wait while class has arrived.	Ability to control light	Forced in areas kids can't climb!! Divisions b/w cleaner things in every area students w/ physical impairments can access All plants are non-toxic + playground surfaces could be eaten Controlled access to certain activities (water, sand)	Not too loud/overstimulating	Quiet space such as book area available	Sinks in class that children can use w/out steps Maid carpet - use easy to clean surface Fridge close to stove snacks + lunches (in class is helpful) especially for STEP class	Changing table Bathroom in class Child-sized sink No auto-flush toilets	Distance as close to classrooms as possible			Fenced, safe	Space for classes to wait together while kids wait for buses AND family pickup	
MENTAL		Transitions can be challenging, especially waiting + long walks.	Small space for schedule other circle materials. Large enough for 15-20 students to sit + move/dance Limited distractions	Places to be together + alone Hiding spaces Sensory experiences Activities that foster social play: see saw, double bikes, trains, wagon, big blue blocks, pretend		Child-sized tables that seat 4-6 kids Storage for adaptive equipment (spoon, cups...)		Proximity close to typically develops peers - No special ed wing!!	or with	Nice space for initial evaluations (families' 1st experience with the center)	Library can step out w/ family not have to sit and attend w/ class (challenging activity) Or, include other play activities.		Big gathering spaces for pod-sized groups	







# Arrival Experience Imagined

What kinds of Activity might happen in this space?

- :: Bus/parent drop-off
- :: Waiting for families
- :: Parent conversations
- :: Community gatherings
- :: Caregivers Socializing
- :: Low risk play, part of a walking/exercise circuit



What do you need for these activities?

- :: Seating
- :: Covered area
- :: Waiting space secured from traffic
- :: Welcome signs and maps
- :: Picnic tables
- :: Bike rack
- :: Clear circulation for pedestrian, bikes, and cars
- :: Well defined boundaries at bus waiting area
- :: "Wow" moment to invite people in
- :: Informal low risk play elements





EDWIN PRATT EARLY LEARNING CENTER









# Backyard / Porch Imagined

What kinds of Activity might happen in this space?

- :: Biking
- :: Pretend play
- :: Snack
- :: Art and science
- :: Climbing
- :: Gardening
- :: Project work
- :: Sensory Play
- :: Hiding



What do you need for these activities?

- :: Bike and path
- :: Kitchen, animals and tables
- :: Picnic tables
- :: Rocks, sand, plants and water
- :: Logs, movable parts - planks
- :: Garden plants
- :: Bushes, trees and arches
- :: Swings under porch
- :: Storage (bikes etc.)



















# Shared Activity Court Imagined

What kinds of Activity might happen in this space?

- :: Being under awning free from rain/sun
- :: Gross motor play
- :: Quite Space
- :: Imaginative play in natural space
- :: Loose objects play
- :: Group project (long term)
- :: Gathering in a circle



What do you need for these activities?

- :: Shelter and accessibility
- :: Contained space
- :: Storage
- :: Water and water table
- :: Hard surface flooring
- :: Tables and chairs
- :: Art easels
- :: Children's bathroom
- :: Teaching kitchen

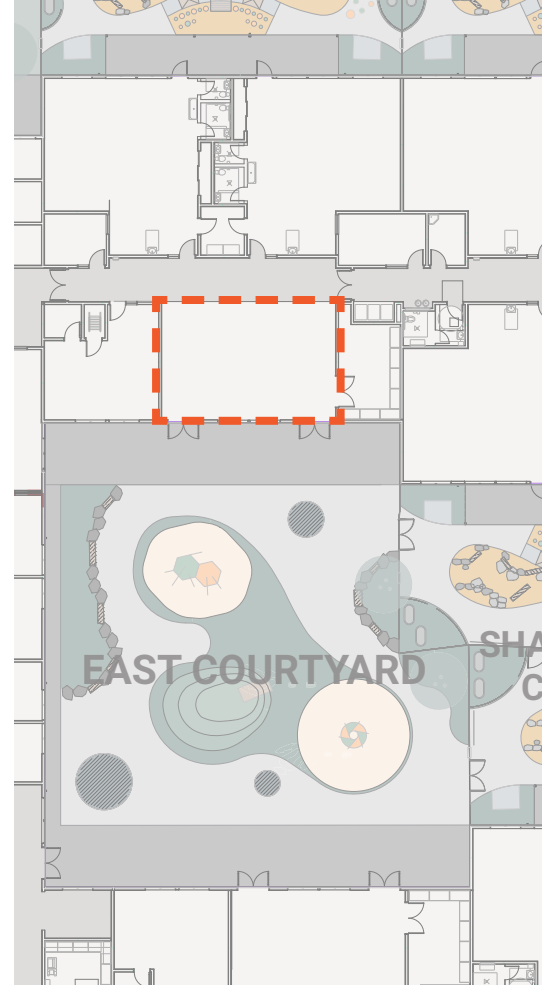




Gross Motor Play



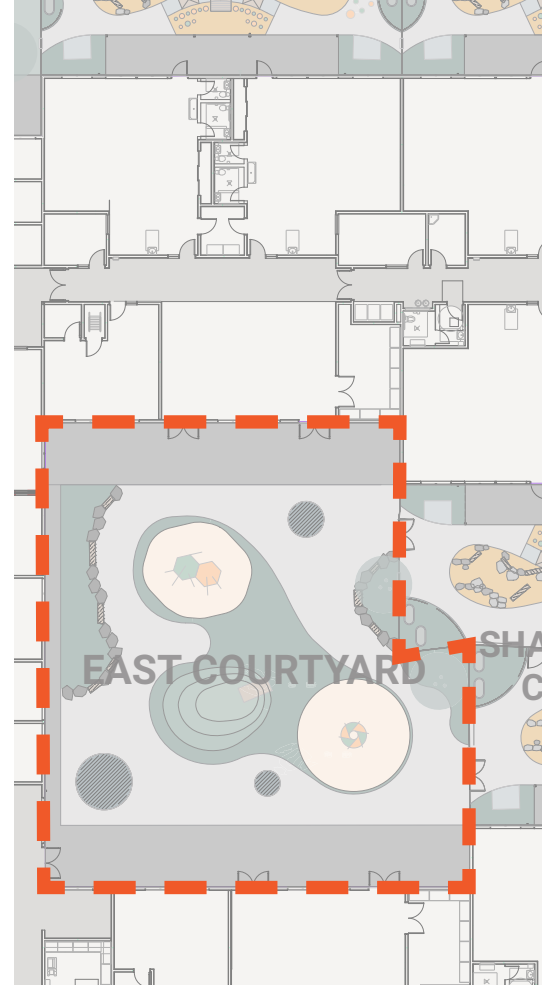
Large Outdoor Play



## Gross Motor Indoor Play

© 2022 MAHLUM ARCHITECTS





Outdoor Play

6,900 sf

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# On-site Field Trip Imagined

What kinds of Activity might happen in this space?

- :: Running
- :: Biking
- :: Over/under/in (hide and seek)
- :: Climbing
- :: "Hiking"
- :: Outdoor learning
- :: Observation
- :: Play and explore in the nature
- :: Experience of Identity, wonder, and sense of place
- :: Imagination Play
- :: Messy play area
- :: Digging
- :: Gardening



What do you need for these activities?

- :: Representation of local ecology and places
- :: Garden
- :: Mud-pie kitchen
- :: Hills
- :: Shelter
- :: Bridges
- :: Animals
- :: View to bog
- :: Pathways
- :: Field
- :: Trees
- :: Over/under/in ("Hide")
- :: Access to water
- :: Loose parts
- :: Climbing tree







A photograph capturing a moment of joy and celebration. Two individuals are shown from the knees down, splashing in water. The person on the left wears dark shorts and black sneakers with white laces. The person on the right wears black leggings and white sneakers with white laces. The water is splashing upwards, creating a dynamic and energetic scene. The text "Thank You!" is overlaid in a bright yellow, sans-serif font, centered horizontally and slightly lower in the frame. The overall mood is one of gratitude and happiness.

Thank You!