Designing for Special Education Inclusion

02.28.2024

PRESENTERS

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PK-12 Practice Leader

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NAC

Learning Objectives:

1. Participants will learn the significance of inclusive design for special education and explain how it positively impacts the overall learning experience and wellbeing of all students.
2. Participants will learn the importance of designing a building holistically and how incorporating inclusive design from the largest site level to the small details benefits special education student safety and cognitive function.
3. Participants will learn how to incorporate inclusive design for special education at the overall site and building level, and understand how it aids in the routines and processes necessary for special education student welfare.
4. Participants will learn how to incorporate inclusive design for special education at the interior building and classroom level, and understand how incorporating flexibility, variety, and sensory transitions into spaces aids in creating a comfortable, healthy, and successful environment for all students and educators.

AGENDA

01 : INTRODUCTION

02 : SITE & LAYOUT

03 : SPACE DESIGN

INTRODUCTION


NAC
ARCHITECTURE
DESIGNING FOR
SPECIAL EDUCATION
BEST PRACTICES FOR SPECIAL NEEDS LEARNING FACILITIES

Interviewees

Dr. Brian Lowney
Assistant Superintendent of Secondary Schools
Bethel School District, Graham, Washington

Dr. Anna Osipova
Associate Professor, Division of Special Education & Counseling
California State University, Los Angeles

Jamee Zipkoff
Assistant Principal of Special Education
Los Angeles Unified School District

Flint Simonsen
Associate Professor, Special Education and Applied Behavioral Analysis
Whitworth University, Spokane, Washington

References

Gaines, K. S. & Curry, Z. D. (2011). **The Inclusive Classroom: The Effects of Color on Learning and Behavior**. Journal of Family & Consumer Sciences Education, 29(1), 46 – 57.

Mostafa, M., (2008). **An Architecture for Autism: Concepts of Design Intervention for the Autistic User**. Archnet-IJAR, Volume 1 – Issue 1, 189 – 211, DOI: 10.26687/archnet-ijar.v2i1.182 · Source: DOAJ

Mostafa, M., (2014). **Architecture for autism: Autism aspectsstm in school design.** Archnet-IJAR, Volume 8 – Issue 1, 143 – 158, DOI: 10.26687/archnetijar.v8i1.314

What is a Learning Disability?

A learning disability is a difference in brain function that affects cognitive processes related to learning.

AROUND 15% OF THE US POPULATION, OR **1 IN 7 INDIVIDUALS,** HAS SOME FORM OF LEARNING DISABILITY.

Salish Sea Elementary

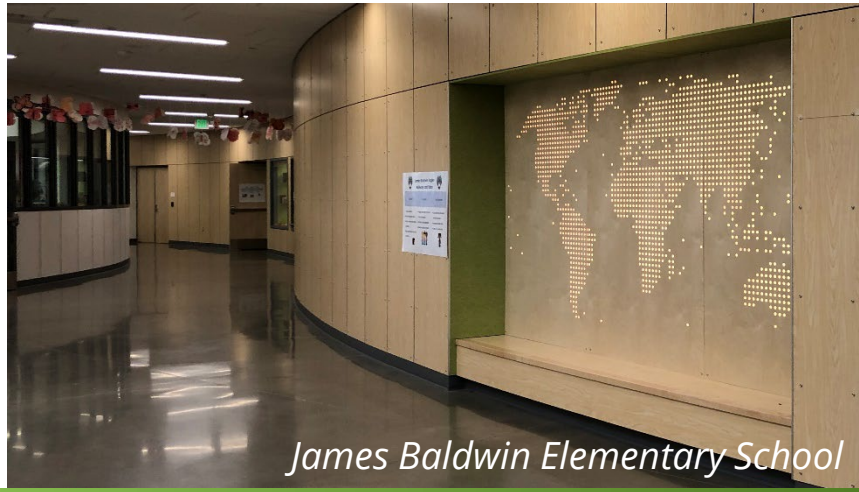
2e students, *twice exceptional*, are students who have a learning disability but also highly gifted in another domain.

SITE & LAYOUT

Site Design:
Drop Off and Entry

- **Spark Curiosity: Interactive Elements**
- **Set the Stage for Learning: Support Space Orientation**
- **Transparency: Create a Sense of Belonging for Students & Parents**


Hazel Wolf K-8 E-STEM School


James Baldwin Elementary School

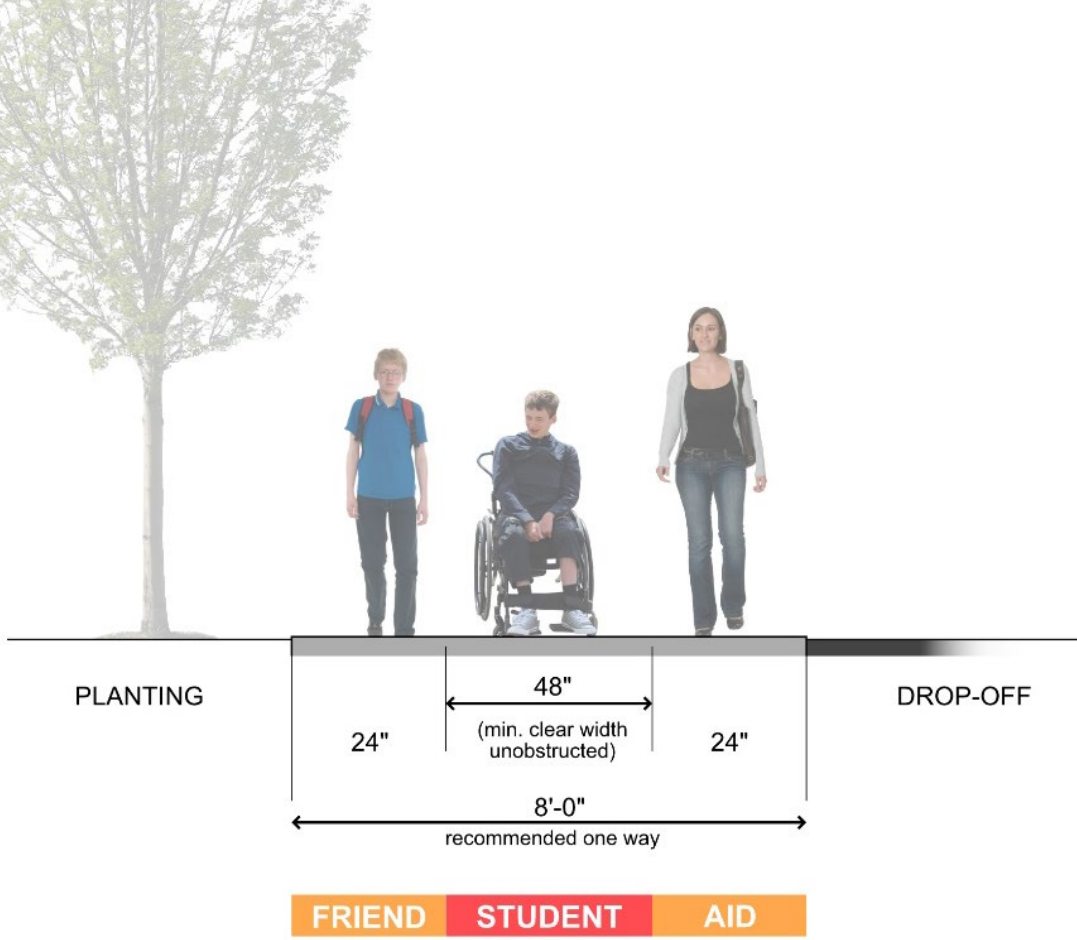
Site Design:
Drop Off and Entry

- Covered Drop Off/Pick Up Zones
- Level Paving and Flush Transitions
- Barrier-Free

Wonderful College Prep Academy

Site Design:
Drop Off and Entry

- **Wide Entry Walks to Fit:**
  - Student
  - Friends
  - Para-Educator/Aid
- **Mobility Equipment Turning:**
  - Turning diameter for **wheelchairs** was updated from 60” to **67”** in the 2017 A117.1.
  - “The minimum diameter for an **electric wheelchair, scooter, or reclining wheelchair user is 94 inches**, while more room is always preferable.”*



*https://scootaroundstore.com/en/wheelchair-turning-radius-everything-you-need-to-know

Site Design: Playgrounds

- **Facilitate Multiple Types of Play and Interaction:**
  - Informal Play
  - Hard-Surface Play
  - Play Structures / Soft-Surface Play
  - Playfields
  - Covered Play
  - Sensory Gardens
- **Quiet Reflection Areas**
- **Transition Zones**

John Campbell Primary School

Site Design: Playgrounds

- **Level Paving and Surface Materials**
- **Gradual Grade Changes**
- **Maintenance**

Site Design: Wayfinding

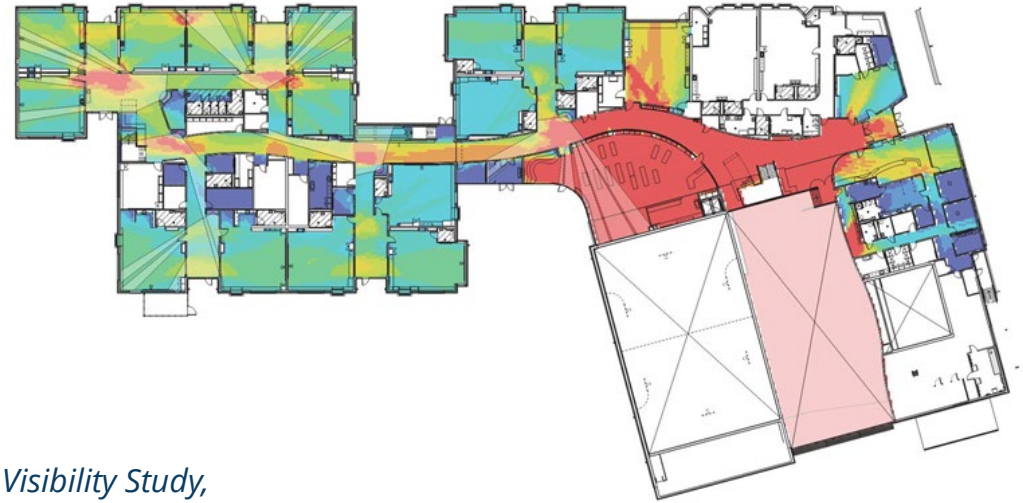
Graphic Imagery in Addition to Written Words for:

- Language Processing Disorders
- Young Students
- ESL

John Adams Middle School

Quincy High School

Building Layout



Visibility Study,
James Baldwin
Elementary School

Locate spaces based on acoustical and stimulatory similarities

High Stimulus Spaces

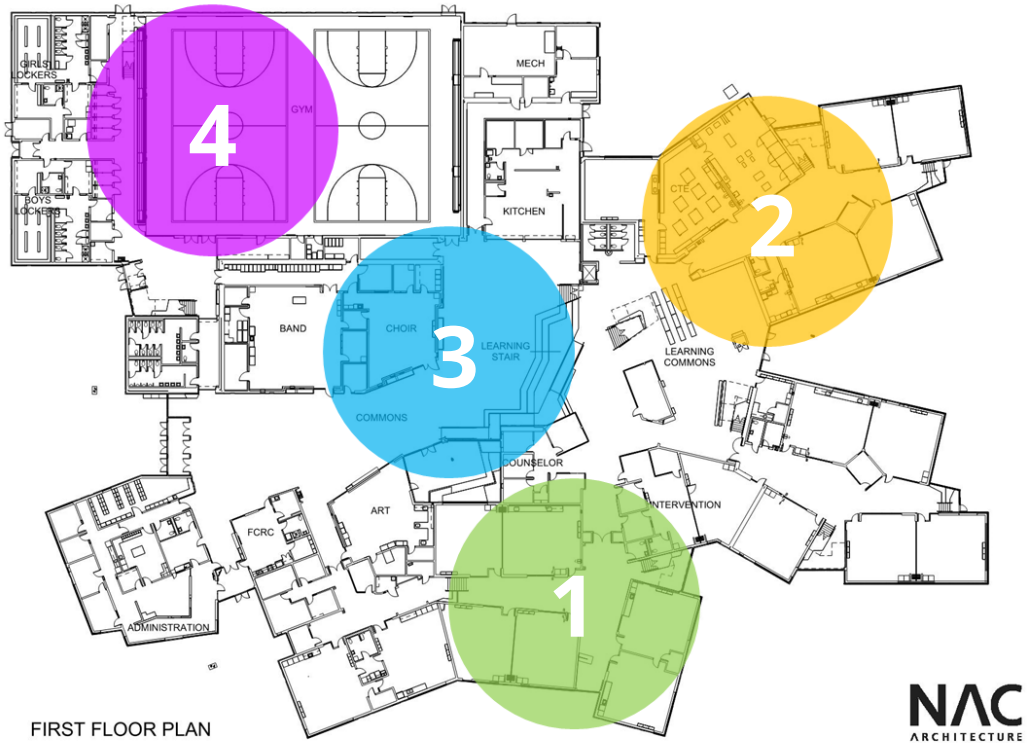
- Gyms, physical activity areas
- Music Rooms
- Commons and Cafeterias
- Entry and Drop Off Zones
- Playgrounds*

Low Stimulus Spaces

- Libraries
- Computer Labs
- Speech Therapy
- Administration
- Classrooms

Layout:
Spatial Sequencing

- **Routine**
- **One-way Circulation**
- **Age Level or Grade Level**



SPACE DESIGN

Outdoor Learning Spaces

- **Outdoor Classrooms**
- **Sensory Gardens**
- **Vocational Gardens**

Dr. Owen, C. (2016) *Design Across the Spectrum*. School of Architecture & Design, University of Tasmania, Australia.

McAllister, K., & Sloan, S. (2016). Designed by the Pupils, for the Pupils: An Autism-Friendly School. British Journal of Special Education,

Silas High School

Hazel Wolf K-8 E-STEM School

Playa Vista Elementary School

Vocational Gardens

- **Pair Vocational Gardens with Work Areas**
- **Vegetable Gardening Skills**
- **Floral Arranging**
- **Herb Drying and Packaging**

Circulation Spaces

- Clear, Calm Flow
- Indirect and Natural Lighting
- Minimize Glare
- Sound Absorption
- Curves
- Transition Zones

Missoula International School

Machias Elementary School

High Traffic Areas

- Wide Enough to Accommodate Large Groups – Min. 10’-0”
- Signage and Graphics to Manage "Traffic"
- Reduce Conflict and Overstimulation
- Rounded Corners

Carl Sandburg Elementary School

Transition Spaces

- Prepare Student For Next Activity Zone or Stimulation
- Recalibrate Student
- Incorporate Nature
- Indirect & Natural Light
- Acoustic Treatment

La Center Middle School

Riverview Elementary School

Classrooms: Layout

- **Transparency**
  - **Sense of Belonging**
  - **Connection**
- **Entries Opposite Teaching Wall**

Classrooms: Layout

- Zones for Flexibility
- Variety of Furniture
- Sensory Zones & Reflection Spaces
- Multiple Teaching Walls
- Classroom Shape

Stevens Creek Elementary School

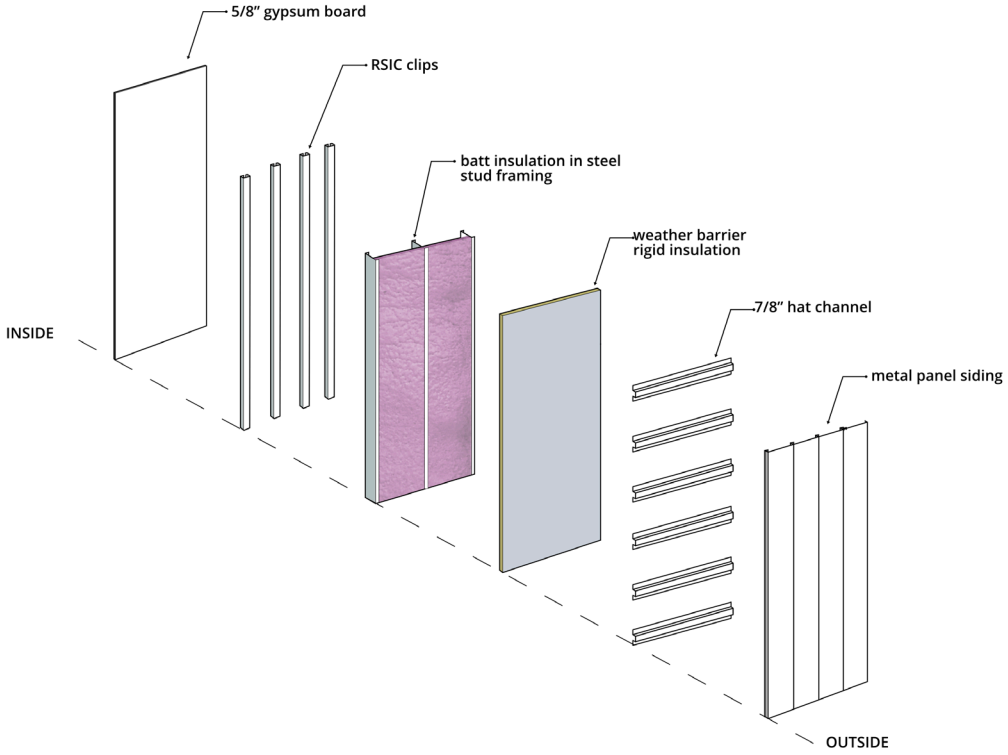

Happy Valley Elementary School

Classrooms: Multiple Instructors

- Instructor & Para-Instructor
- Storage
  - Equipment Storage
  - Instructor Storage

Classrooms: Acoustics

- Wall Construction
- Mechanical Systems
- Spatial Adjacencies
- Site Background Noise



Cherry Crest Elementary School


Venice High School

Classrooms: Lighting & Daylighting

- **Indirect & Soft Overhead Lighting**
- **Natural Light**
- **Shades/Glare Reduction**
- **Daylight Indicators/Routine**

Dessie Evans Elementary School

Summit Atlas High School

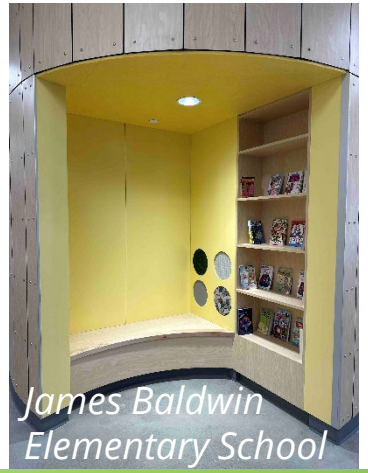
Classrooms:
Color & Visual Aid Placement

- **Visual Aid Placement Behind Students**
- **Accent Color for Focus on Side Wall**
- **Color Theory: Warm Neutrals, Greens**


Mount Si High School


Stevens Creek Elementary School

La Center Middle School


James Baldwin Elementary School

Breakout Spaces & Escape Spaces

- **Support Classroom Functions**
- **Sensory Input, Focus**
- **Separate Spaces**
- **Visible from Classroom**

New Bethel High School

Open Spaces: Variety

- Variety of Furniture Types
- Zones, Scale and Capacity
- Sensory Zones
- Acoustic Treatment

Open Spaces: Ventilation & Sensory Input

- **Ventilation to Reduce/Isolate Unwanted Smell**
  - Mechanical Separation
  - Physical Separation
  - Building Layout


Tillicum Middle School

Open Spaces: Variety

- **Variety of Activities in Gyms based on Sensory Input**
  - Sound Based Activities
  - Other Activities which do not require Sight

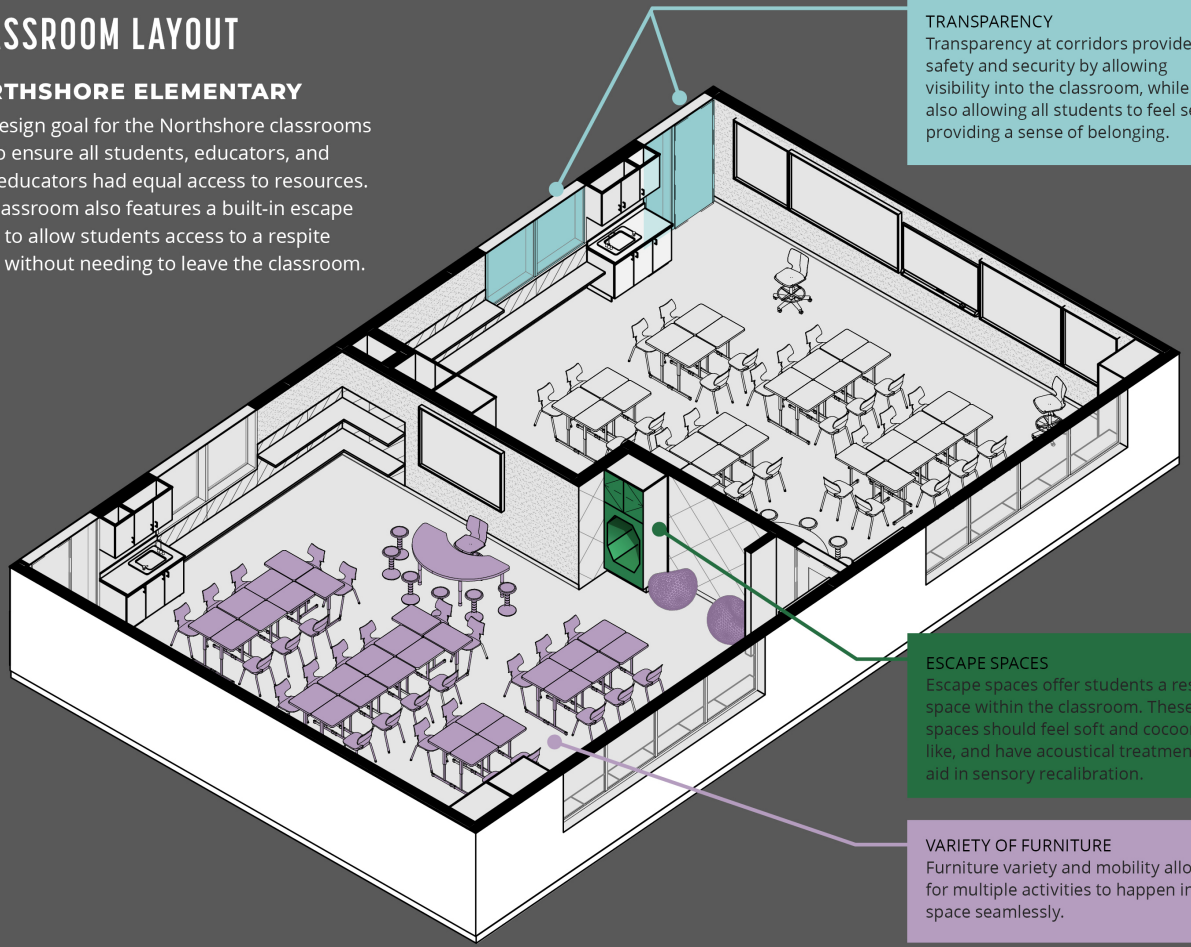

Hamlin Robinson Middle School


Black Diamond Elementary School

CLASSROOM LAYOUT

NORTHSHORE ELEMENTARY

The design goal for the Northshore classrooms was to ensure all students, educators, and para-educators had equal access to resources. The classroom also features a built-in escape space to allow students access to a respite space without needing to leave the classroom.



TRANSPARENCY
Transparency at corridors provides safety and security by allowing visibility into the classroom, while also allowing all students to feel seen, providing a sense of belonging.

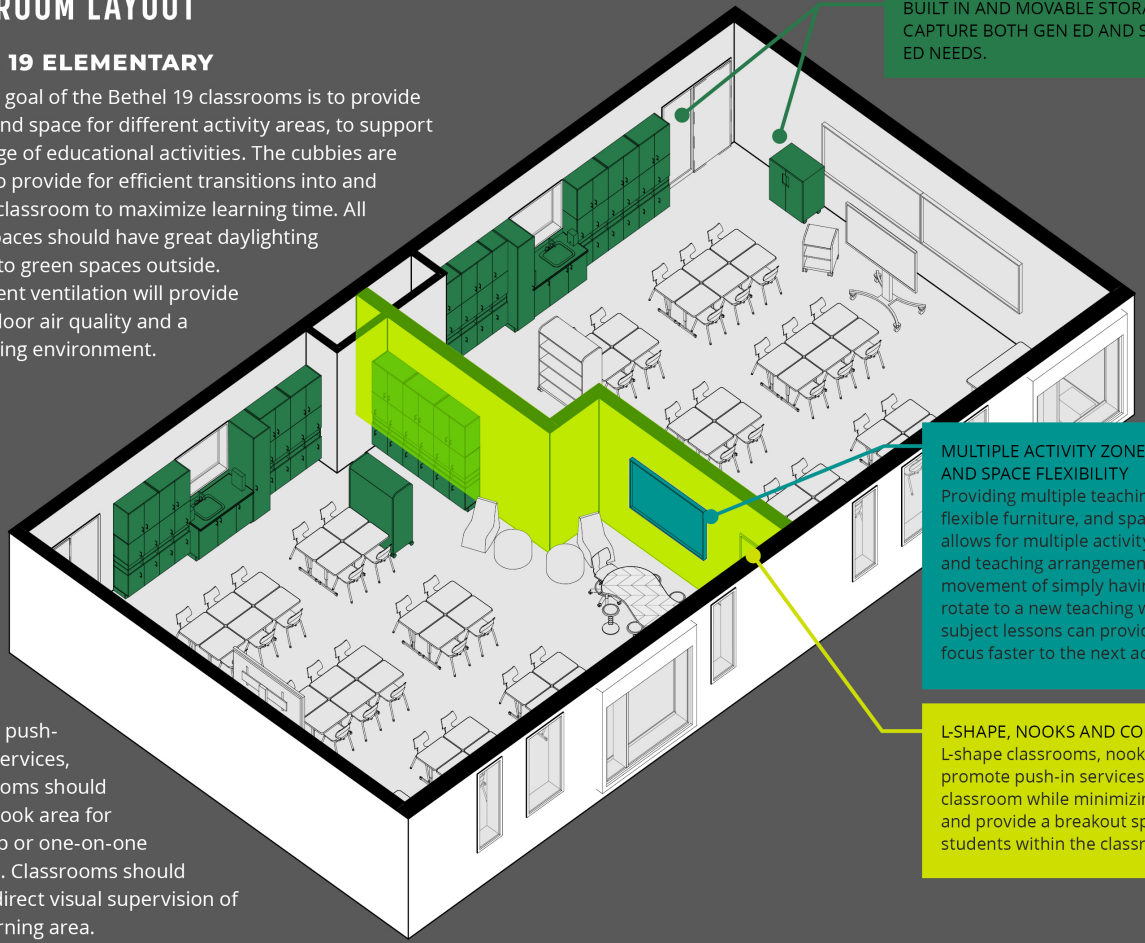
ESCAPE SPACES
Escape spaces offer students a respite space within the classroom. These spaces should feel soft and cocoon-like, and have acoustical treatment to aid in sensory recalibration.

VARIETY OF FURNITURE
Furniture variety and mobility allows for multiple activities to happen in a space seamlessly.

CLASSROOM LAYOUT

BETHEL 19 ELEMENTARY

The design goal of the Bethel 19 classrooms is to provide flexibility and space for different activity areas, to support a wide range of educational activities. The cubbies are intended to provide for efficient transitions into and out of the classroom to maximize learning time. All learning spaces should have great daylighting and views to green spaces outside. Displacement ventilation will provide healthy indoor air quality and a quiet learning environment.



BUILT IN AND MOVABLE STORAGE TO CAPTURE BOTH GEN ED AND SPECIAL ED NEEDS.

MULTIPLE ACTIVITY ZONES AND SPACE FLEXIBILITY
Providing multiple teaching walls, flexible furniture, and space flexibility allows for multiple activity zones and teaching arrangements. The movement of simply having students rotate to a new teaching wall between subject lessons can provide renewed focus faster to the next activity.

L-SHAPE, NOOKS AND CORNERS
L-shape classrooms, nooks and corners promote push-in services in the classroom while minimizing disruption, and provide a breakout space for students within the classroom.

To support push-in special services, the classrooms should include a nook area for small group or one-on-one instruction. Classrooms should also have direct visual supervision of shared learning area.

QUESTIONS & DISCUSSION

THANK YOU
FOR ATTENDING

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