SENSORY SYNTHESIS

EXPLORING THE INTEGRATION OF SENSORY DESIGN IN EARLY EDUCATION





PREMISE

All children deserve the chance to learn in an environment that is well suited to them, to do so with their peers, and to be equipped to for a future that lives up to their full potential.



RESEARCH



AUTSIM SPECTRUM DISORDER

- Developmental Differences in the Brain
- Spectrum
- Shows in Early Childhood
- Lifelong
- Early Intervention is Ideal and Most

Effective

• Diagnosis have Risen, Likely due to

Better Understanding

The Autism Spectrum is varied; it is understood better as a radial spectrum rather than linear.



SENSORY SENSITIVITY

- Even Designation of Stimuli Importance
- Distortion can be Varied and Individual
- Sensory 'Noise' in all of the senses



Curtis Miner Architecture

STRATEGIES

- Reduce Visual Clutter
- Design to the Task of the Space
- Multiple Learning Spaces Throughout the Day
- Proximity and Separation as Required by Task
- Intentional use of Pattern and Visual Cues to

Communicate



Environments 4 Health Architecture



Environments 4 Health Architecture

PROJECT EMPHASIS





SCALE

CONTEXT





WINONA MN

• 38th largest town in Minnesota (Pop.

26,600)

- Lags behind larger cities
 - implementing centers for ASD, but
 - still large enough to have need for it
- Elementary Schools are at capacity
 - after two were closed
- Landlocked between Mississippi River

and Bluffs



MADISON ELEMENTARY

- Built in 1932
- Typical 'H plan"
- Local Historical Significance
- Utilizing Shell & Expanding to meet

the programmatic needs of the project



SOLUTION







STUDENT ENTRY

Color Creates is Engaging to Welcome the Students Each Day





LEVEL 1 PLAN

Learning Support

WC

Administration

Sensory Ramp

Classrooms

Community Learning

One-on-One Breakout

Mechanical

Breakout Spaces



LEVEL 2 PLAN

Learning Support

WC

Administration

Sensory Ramp

Classrooms

Community Learning

One-on-One Breakout

Mechanical

Breakout Spaces

SECTION





PARTIAL SECTION



COMMUNITY SPACE

Sloped Floor Along Hexagon work with the Universal Ramp

Fritted Skylights bring in Soft Daylight



COMMUNITY SPACE

Universal Ramp Design allows Cohesive Circulation

N.





TECHNOLOGY WALL

74°

The Sensory Path Weaves Past Tech Wall, Tactile Wall, and through the Hallway





The Hexagons Provide a Space to Gather as the Day is Starting and be Utilized throughout the Day

GEAR WALL





CLASSROOM

Daylight and Electrical Lights work in Tandem



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The Color Pallet is Calm to Promote Focus Work





The Mirror can be Utilized as a Therapy Tool



Interior Room receives Indirect Daylighting

ONE-ON-ONE BREAKOUT

Lighting Conditions are Consistent with Classroom

GROUP BREAKOUT

Proximity to Classroom

SENSORY GYM

Sensory Wall Board Included as Therapy Tool

M

SENSORY GYM

ASSEMBLY SPACE

LIBRARY

Electrical Lights Mirror the Skylights

'Nests' Contrast the Option of Tables for Workspaces

PLAYGROUND

GINY

Color adds Energy to the Playground

Tactile Sensory Obstacles Weave through Interior and Exterior Spaces

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