

Livonia Early Childhood Center

CASE STUDY



The Early Childhood Center in Livonia, Michigan, boasts a unique interior design feature: Polyvision digitally printed CeramicSteel.



The recently opened, brand-new Early Childhood Center is part of an initiative within the Livonia public school district to upgrade its facilities, promoting enhanced learning experiences for its students. The 72,000 square foot Center is primarily new construction built around a significantly renovated section of a previous junior high school. The building includes 29 classrooms, a large gross motor space, ancillary spaces and 60,000+ square feet of playground area. The building serves young learners ranging in age from infants up to 5-year-olds and has an enrollment of over 700 students.

The school's mission is to provide a solid foundation for all students through sensory learning. Studies show that a vital part of a child's learning experience is deeply embedded in sensory play. This active learning method allows them to explore freely and develop creativity, spatial awareness, and problem-solving with a fun, low-pressure approach, key to continued successful learning.



The design team at TMP Architecture utilized ECC's objectives as a springboard for an assortment of interior finishes. The classrooms feature classic framed whiteboards with Polyvision's signature CeramicSteel surface, ideal for focused collaborative learning. In the family areas, the designers wanted to create playful, interactive gathering spaces for the students and others to express their creativity. Having specified printed CeramicSteel in 2022 for another Michigan school, they knew that this product was ideal to convey their design intent and provide superior performance over the long term.

One of the most appealing advantages of printed CeramicSteel is its sustainable and eco-conscious profile. The durable porcelain enamel surface far outlasts all other typical wallcovering materials. Backed by Polyvision's "Forever Warranty", this high-end surface is designed to retain its writing and erasing qualities, gloss level and color consistency for the life of the building or for as long as the product is in use, whichever comes first.

The long product lifecycle means a relatively low cost of ownership, an important consideration for educational facilities with tight budgets. Unlike other wall materials, CeramicSteel won't need replacing, a double win for the environment by keeping excess building materials out of the landfill. Polyvision products also help maintain healthy indoor air quality by emitting no harmful VOC compounds, earning the coveted Indoor Advantage Gold and Cradle-to-Cradle Bronze Certifications.

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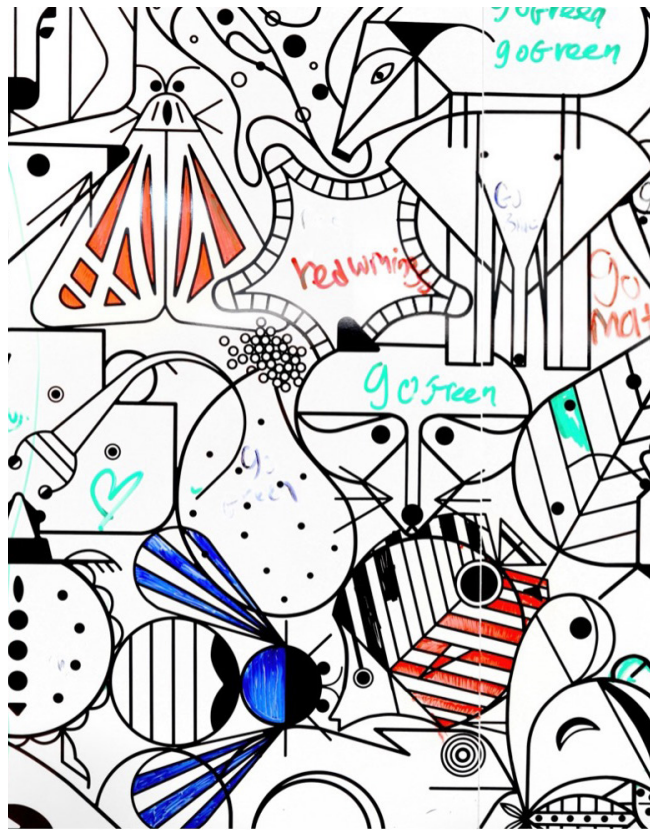
Toddlers absolutely delight in exploring their world through their senses. Sensory play - play that stimulates any of a child's senses - builds cognitive skills and influences how your child learns about their world.”¹

Jenny Kable

¹ <https://www.oac.edu.au/news-views/sensory-play/>

The graphic selected for printing was Charley Harper's *Beguiled by the Wild*, a highly stylized and whimsical composition of animal figures drawn in outline. This pattern has a "coloring book" feel, and students can express themselves by coloring within the animal shapes, or perhaps drawing new animals, other shapes or adding words to the wall. This large-scale graphic wall provides a collaborative space to interact with friends and family while developing their fine motor skills outside the traditional classroom setting.

The pattern was printed with solid black ceramic ink that is fused into the ceramic surface after processing through a high-temperature furnace. In addition to fulfilling the design intent, the design team at TMP selected the Flow product for its versatility. Flow panels can be configured to install in a vertical or horizontal layout to suit the project specifications. For ECC, the designers chose the vertical application for functionality given the shorter heights of the younger students.



“ Our client was concerned about the visibility of seams and how the boards would function over time with more seams than a standard horizontal application. This was easily resolved by using Polyvision Flow boards.”

Lauren Bush,
Interior Designer at TMP

Artwork by Charley Harper produced under license with the Charley Harper Art Studio

A primary benefit of CeramicSteel, especially for school environments, is that it is inherently magnetic, allowing different materials to be easily attached with regular magnets. The surface is also resistant to staining, scratching, fire, and chemicals, additional bonuses to a high-quality, long-lasting product.

Educational facilities that see high levels of traffic daily are notorious highways for various microbes, but CeramicSteel has built-in health advantages to help combat the spread of illnesses. The non-porous nature of the porcelain surface makes it an unfriendly environment for the reproduction of bacteria, and it can withstand cleaning with strong disinfectants without compromising the integrity of the surface.

Polyvision products are well-designed to minimize the typically large ecological footprint of interior finish materials, making them sustainable and eco-friendly, providing decades of use in demanding environments. A usable lifecycle of 25+ years plus US-based production minimizes project timelines as well as transportation requirements.

Additional advantages include expert sales and print teams who facilitate efficient project management, giving clients an unparalleled opportunity to create their own eye-catching custom walls.





In classrooms around the world, from K-12 schools to universities, Polyvision CeramicSteel surfaces are essential teaching tools that support dynamic, visual learning. Whether in smooth, glossy white or enhanced with printed imagery, these durable surfaces contribute to environments where students thrive. Extensive research shows that visual teaching methods significantly enhance student engagement, understanding, and long-term knowledge retention.

Working together, the school and the design team at TMP made a clear commitment to inclusive, sensory, and effective educational experiences for all children at the Early Childhood Center through vibrant and purposeful material selections.

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More than making things pretty, design supports learning. Use of color and images increases memory and engagement.”²

Sarah Schroeder

² <https://www.edutopia.org/article/using-lessons-visual-design-make-better-materials-students/>

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