

CASE STUDY



Project | *Lancaster Science Factory*
Location | *Lancaster, PA*
Architect | *Tippetts/Weaver Architects, Lancaster, PA*
Product | *InvisAcoustics™, SoundScapes® Shapes, SoundScapes Blades™*



1 877 276-7876
armstrongceilings.com/exposedstructure

BPCS-6235-120

the challenge:

The Lancaster Science Factory, an interactive science center for children in Pre-K to 8th grade, recently completed a major renovation. According to Executive Director, Emily Landis, one of the priorities was the improvement of the acoustic environment. "Our Hall of Science was one large, cavernous, 12,000-square-foot, 30-foot-high, exposed structure space that had plenty of hard surfaces and very little acoustical treatment," she says. "The result was a very loud atmosphere that reduced the quality of the experience for all."

the solution:

To improve the acoustical environment, the Science Factory partnered with Armstrong Ceiling and Wall Solutions and installed a variety of acoustical solutions. InvisAcoustics™ ceiling panels were installed in the ceiling of the Hall of Science. Designed specifically for exposed structure spaces, the 2' x 4' panels maintain the integrity of exposed structure designs while reducing sound.

The ceiling panels have a Noise Reduction Coefficient (NRC) of 0.75, indicating they absorb 75% of the sound that strikes them. At the Science Factory, the panels are black and directly attach to the webbing of the Hall's I-beams, increasing sound absorption while virtually disappearing in the ceiling. As architect Rachel Haynes notes, "By tucking the panels into the I-beams, we were able to add acoustics while maintaining the exposed structure visual of the deck that we desired."

SoundScapes® Shapes acoustical panels were installed in the room on two opposite walls to capture sound before it reaches the ceiling. The hexagon shapes feature five custom colors and are installed both individually and grouped in the shape of acoustical "molecules." "The SoundScapes Shapes allowed us to introduce a colorful, fun shape into the space and to capitalize acoustically on the empty wall space that existed," Haynes notes.

To provide even more sound control, SoundScapes Blades™ were also installed. The acoustical blades feature a linear visual along with excellent sound absorption. The Hall now features three ribbons of the vertically hung panels. Two are kiwi in color and draw visitors to the Water Lab and new Curiosity Wing. The third is positioned over the aerodynamics area and is white to simulate clouds. "We wanted to draw the eye up and the floating blades accomplished that goal along with their acoustical benefits," Haynes says.

In terms of acoustical performance, on-site acoustical testing validated that the addition of the acoustical treatments led to a dramatic improvement in sound control. Prior to treatment, the reverberation time was 2.6 seconds. After installing the acoustical panels and blades, reverberation time decreased to 1.5 seconds, an acoustically significant improvement of 42%.

Inspiring Great Spaces®

Armstrong
CEILING SOLUTIONS