

CASE STUDY

Landscape Science Rooms: Creating a Higher Level of Students' Engagement Karamu High School

As part of the restructuring of the school's buildings, Karamu High School in Hastings has developed a new science block featuring six landscape shaped science laboratories in the aim of enhancing teacher-to-student learning environment. Furnware teamed up with Kevin Beaumont, Head of Faculty of Science to make this vision a reality.

Layout and Purpose

When setting up the physical layout of a learning environment, the decisions are determined by the pedagogy. In Karamu School's case the science curriculum relies on teacher-to-students interaction whereby students are attentive to the experiments conducted by the teacher.

As outlined by Martin O'Grady, Principal, the purpose of constructing the new science rooms in a landscape shape was mainly to ensure the interactions between teachers and their students were maintained throughout a session; "Expanding the laboratory space this way has enabled inquiry learning and left no science student behind."

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The old portrait shaped science labs had lab benches laid out using L shape arrangement. This meant four students would be grouped at one time, arguably resulting in higher level of off-task time and disengagement. "With the old portrait layout room a lot of space is wasted at the front due to the teaching area and the lab equipment pushing everything else to the back" Kevin says. "As a result students get more tightened up and inevitably you will get negative interactions."

Matching the Furniture

While the construction of the science block was underway, the school approached Furnware to come up with a tiered seating solution that would seat 30 students equally in three rows. Furnware visited the science block and examined the rooms. To cater for the tiered seating lab benches in two different heights were provided; 900mm high Lab Benches for the back row along with 660mm high Bodyfurn Lab Stools, and 780mm high Lab Benches along with 560mm Bodyfurn Lab Stools for the first and second rows. An H frame was attached to the Back benches so students had the ability to sit on either side, while the front rows had a standard frame to allow room for storage.



This tiered seating Kevin suggests, has enabled students seated at the back row to be in more contact with the front. Whereas, he continues, if the back row was the same height of the first two rows, students at the back would be left out.

The Benefits

With the combination of the tiered seating and the landscape layout, Martin suggests, it is a bit hard for students to drift off. Furthermore, the new setting has reduced noise and left a positive acoustic affect on the learning environment; "because there is no physical room for private conversations to take place, students have become more focused on their learning," Martin adds.

According to Kevin off-task interactions among students have been minimised. Because there are either two people beside you or one if you are sitting at the end of the bench, he explains, there is no room to communicate to other students as was the case with the old portrait layout. He also notes that since the faculty has moved to the new premises, there has been a lot less discipline issues that he has had to deal with.

The school's new furniture has positively impacted the wellbeing of students. Kevin advises that by using the Bodyfurn Lab Stools students have been experiencing higher levels of in-class comfort and are no longer complaining of sore backs. "The faculty and its students have been thrilled with the way the classrooms work, and we have had only positive feedback from all concerned." Kevin concludes.

Sources:

Schachter, R. *School Science Labs: Some districts bite the bullet to update their antiquated facilities.* District Administration, November 2008.

<http://www.labplan.org/>

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