



# The Imagination Within

Unlike schools in the past, there is a lot of thought and logic behind the way learning spaces are being designed and decorated.

## By Thomas G. Dolan

t's a pretty exciting time for interior design right now," says Gaylaird Christopher, AlA, president, Architecture For Education, Inc., Pasadena, CA. "Probably the most important issues now are thinking about how kids develop, how students can best use a classroom, and how teachers can best involve the students in different activities. This has always been an issue, but now the most cutting-edge projects result in a much more interactive environment. Instead of having students sitting at desks in a row to be lectured at, things are now much more flexible."

In these more innovative settings, Christopher explains, desks can be separated for solitary study, but also easily moved together at office stations to work on projects or in groups. There are also provisions for a more specialized space when there needs to be quiet for a lecture.

Also, there are dedicated spaces for specialized subjects such as teaching science or labs. "The design for science labs is changing fairly dramatically," Christopher says. Instead of fixed stations around the perimeter, now there is more of a crescent, almost half circle radiating from a center point. The students can listen to a lecture or work on a project both at the same time. For instance, the instructor might point out something of interest from the student's computer to an overhead projector.

He can interrupt the lecture to have the students work out an illustrative example at the lab right at hand. Care is taken, Christopher explains, to separate the computer area from the wet or sink area. The main advantage, he says is that, "you don't need to move from a lecture to a lab setting. You can do both in the same setting."

As one illustrative example,
Christopher mentions the Wathem
Aviation High School, located on the
grounds of Flabob Airport, in Riverside
CA, in which all the classroom spaces
surround a large hanger area. The
students can work on aviation projects
at their desk or move easily into
spaces to work on mock-up airplanes
— working on actual engines or
rebuilding an actual airplane.

"Another thing we are seeing, especially in middle and high schools, is the development of grade-level clustering," Christopher says. He explains that here teachers work with



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smaller groups of students in core subjects such as math, science, English, and maybe a foreign language. "The

teachers get a better understanding of their students over a two- or threeyear period," says Christopher.



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existing desks.

In this regard, the furniture is increasingly designed to allow teachers to do more things in a more flexible space. For instance, the tables are on wheels, which can be locked. The tops are shaped like triangles so they can fit together for group art and other projects. Moreover, they can be put up into a vertical situation to be shoved against a wall and not take up much space. Cabinets are also on wheels and made to be used in more than one way. For instance, whiteboard and tacks are on the front and back.

One of the nice things about having this cohesive group of students in a flexible space is that the teachers tend to come to the students instead of "the crazy noisy times which students go from one end of the campus to another to attend different classes," Christopher says.

There is also a greater interest in sharing space, he continues. Typically,



Shared, or clustered, space, such as this area in the Robert Louis Herget Middle School in Aurora, IL, provide a flexible learning environment capable of delivering the best of what a middle school will have to offer.

hallways are now bigger, but instead of being merely a "highway," the hallway space outside the classrooms are now furnished with worktables, sometimes with computers or maybe soft chairs. Again, since there is less traffic,

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Some classrooms have window seats, pleasant spaces where children can read or be read to. Colors and materials are warmer and more inviting. A large amount of natural light makes for more pleasant spaces, less institutional and more welcoming.

these spaces are much quieter. Sometimes there is a nice glass sectional door, like a garage door, that opens up the classroom to this new 20-ft. section. Also classrooms are provided with outside doors so students can leave without circulating through the hallway, even during recess.

But the trend in interior design is not only toward more efficiency. "There is a strong movement toward more homey, inviting spaces," Christopher says. "Some classrooms have window seats, pleasant spaces where

children can read or be read to. Colors and materials are warmer and more inviting. A large amount of natural light makes for more pleasant spaces, less institutional and more welcoming."

#### Teaching "Environment"

In the past, Christopher continues, teachers were against natural lighting since they felt outside vistas distracted children from paying attention. This attitude has completely changed. Natural lighting has been found to be more conducive to both health



Areas such as the window seat in the Greenman Elementary School in Aurora, IL, allow students to enjoy the natural light, take advantage of its health benefits, and saves the school money on its utility bills.



and learning. Also, there are many efficient and cost-effective ways of bringing natural light into the classroom, not only through windows and skylights, but also through tubes cut through the roof.

There is a strong movement away from carpets to natural materials for the floors. Christopher mentions the Crow Island Elementary School in Winnetka, IL, which, he says, "is made of soft pine, and you can pin things onto the walls. It's been in existence over 70 years and has a much warmer feel than many modern schools."

The Dallas, TX-based SHW Group, Inc. also has a special focus on creating warm natural environments in schools. "We encourage our clients to make good choices early on that will pay off in lower maintenance costs and a better environment for the kids to learn in," says Megan Howie, interiors lead for the firm's North Texas studio.

She adds that SHW tries to practice what it preaches. For instance, the SHW office has cork floors, as opposed to vinyl with its volatile organic compounds (VOCs) that emit harmful gases into the environment. Cork is more expensive initially, Howie says, but the return-on-investment kicks in just after two years because cork involves minimum buffing and no stripping and waxing. Actually, these practices can harm a cork floor, so the maintenance staff should be educated on how you can accomplish more in maintaining good materials by doing less.

An advantage to a material like cork, Howie explains, is that it is more rapidly renewable than, say, traditional forest products. Howie says SHW also believes in cradle-tocradle design. By this she means that a steel frame on a chair would be recycled into the steel frame of another chair, instead of being "downcycled" into a lesser product that would eventually end up in a landfill. For instance, a sheet of paper should be recycled into another sheet of

paper, as opposed to being shredded into wall insulation.

#### Warm and Welcoming

Columbine and other incidents have led to a tighter focus on security. But this, Howie says, can usually be accomplished by having a main entrance leading to a security vestibule

you have to pass through, some schools having mandated metal detectors, and some not.

But, beyond this, Howie says, the intent is to do away with "the institutional feel of hospital-green concrete block walls and make the school as warm and welcoming as possible. The harvesting of natural



the worry of slipping, while allowing enough give to achieve grand, grand jetés!

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light creates stimulating, nondistracting environments."

The use of colors is also important. Blues, greens, and natural earth colors all give a feeling of comfort. Reds and yellows are vibrant and definitely have an effect, so they are perhaps best put to use in different areas. "There are no blanket rules, however," Howie says. "Each school wants something new and different, and we draw from a wide palette of colors. The intent is to make a comfortable environment where students feel safe and secure."

#### Schools as Tools

"Instead of schools just being warehouses for children, with hallways and doors, we work to incorporate learning into the design AIA of the building itself," says David L. Bandy, vice president/director of design, Spectrum Design, Roanoke, VA.

For instance, certain structural, mechanical aspects of the interior may be exposed to allow a teacher to demonstrate a mathematics or science

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concept. "A simple post and beam construction may be made visible so the teacher can show how the trusses work in terms of compression and tension."

Bandy says his firm has been quite successful in asking for textbooks for particular grades, and then incorporating certain principles in the floor design. These include the Golden Ratio that Michelangelo used, the graphic square root of 3, and Venn diagrams combined with color chart circles that overlap; blue and yellow, for instance, shown to result in green.

Other subjects are also included. For instance, the State of Virginia is divided up into regions visible in the floor design, as well as birds and flowers that can double as both design and permanent teaching aids.

Spectrum Design also uses the Anderson Frank Lloyd Wright series of stained glass windows. "Wright was the father of American architecture and used geometric forms, squares, circles, and triangles to create art forms. He would use these for a number of different purposes, such as to represent the structure of a plant," he said

Howie mentioned that, at least in warmer climates, the classroom could open up not only onto the interior hallway but also into the outdoor environment. Bandy also takes his combination of design and teaching tool outside. "We've designed teaching space outside the media center where we have installed a sundial, which is both a part of the design and allows students to get another grounding in science and math."

