

## 21st Century Learning Requires 21st Century Classrooms

With the advent of open office floor plans, huddle spaces, and rooms designed for telepresence, businesses have kept pace with changing technology to alter work environments to meet workforce demands. But our nation's schools haven't done the same.

From improved IT infrastructure to flexible layouts, today's classrooms require certain elements to support digital learning and make the most of tech-enabled teaching trends, including collaborative classrooms and flipped learning environments. In short, to train children to become leaders who thrive in changing business environments, the modern classroom should reflect and support 21<sup>st</sup> century learning.

### Change the Environment to Improve Learning

If a learning atmosphere is uninviting, some students lose interest the moment they walk through the door. Teacher and education journalist, Mark Phillips, [wrote about his experience](#) in a classroom in northern Appalachia. A teacher in the district was struggling to engage students in lessons. When Phillips visited the classroom, he saw a stark environment: An unfinished basement that looked nothing like a friendly learning center. Over a six-week period, the community came together to change the look and feel of the space. After the transformation, the teacher enjoyed higher rates of student motivation.

This example highlights a deep-seated truth about learning: the environment matters. Along with access to familiar, immersive learning technology, paint colors, storage solutions, seating, and access to natural light can also affect mental and physical health. It's time to use that knowledge to transform classrooms and improve the teaching and learning experiences.

### Create a 21st Century Classroom with a Focus on Technology

Technology plays a significant role in 21<sup>st</sup> century education, with students and teachers alike relying on tablets and interactive whiteboards, along with state-of-the-art virtual reality technology and IoT devices. Transforming a classroom often begins with adapting the layout and infrastructure to meet the needs of the digital age.

Technology components may include:

- charging stations for tablets, smartphones, or virtual reality headsets
- cameras for student demonstrations in a flipped learning environment
- LED screens, two-piece projection systems, or interactive whiteboards to enable distance learning

[St. Cecilia School in Ottawa](#), Canada, an interactive, high-tech, open floorplan learning space, has created a wireless environment, giving students the freedom to work from anywhere in the building. Even if your classroom is not as flexible as that, employing Chromebooks, iPads, or tablets gives students the sense of freedom. Virtual reality devices—some as low-cost as Google Cardboard—can offer students access to virtual field trips, which are cost-effective, time-saving, and exciting alternatives to travel and give students the opportunity to visit places not normally accessible on a day trip.

Storage solutions, such as pods that house this shared technology, should be unobtrusive, movable (to fit the flexible classroom design), and permit students to sign out equipment for use while letting teachers easily track their whereabouts. For instance, at St. Cecilia, rolling carts house iPads and ChromeBooks within easily accessible “tech tubs.”

Due to the concrete walls in many school buildings, you may need to work with your IT staff or technology integrator to place wireless routers in each classroom. You'll also need bandwidth to support the devices. But it's OK to start small—perhaps with a handful of Chromebooks and an interactive whiteboard—and expand

your capabilities as teachers grow comfortable with the new technological capabilities and budget becomes available.

## Leverage Technology in a Flexible Setting

To create an inviting learning atmosphere, think about flexibility. Like modern office spaces, modern learning environments should encourage creativity and give students a comfortable space to work both independently and collaboratively.

Instead of dragging a heavy desk into a group setting, easily movable furniture should allow students to work in small groups, as a class, or in individual stations as needed. Optimizing room use with flexible seating allows teachers to plan more creative activities that encourage students to dig into the material and retain more information. St. Cecilia, for instance, [is set up more like a local coffee shop](#) than a classroom. Flexible desks, comfy chairs, and nooks allow students to work wherever they feel most comfortable.

A flexible learning environment and the right technology enables “flipped”— or student-focused—learning, in which the students collaborate on assignments in the classroom that would have traditionally been completed as homework. Reading assignments or lectures, delivered by way of a video presentation, may take place at home.

Technology also enables another key component of flipped learning: Employing different modalities of learning. Some students learn better through independent internet research. Others collaborate to put together a presentation for their classmates. Some might play games that reinforce the material. A flexible classroom layout and the right technology tools make it possible to use these methods and many others for teaching success.

## Employ Lighting and Color to Encourage Learning

Not every aspect of the modern classroom involves digital devices, however. Don't neglect design elements that encourage learning, including the use of natural lighting and bright colors. While there isn't a magic color that helps students learn, brighter colors tend to encourage activity, while more subdued shades are calming. Natural lighting plays a major role in how children and adults feel over time. Although students spend a significant amount of time on digital devices, lack of access to natural light [can contribute to depression](#) and hinder student performance. The modern classroom can incorporate [“daylighting” techniques](#) that include skylights and appropriately placed windows with blinds for energy-efficiency and enhanced learning. If a retrofit is out of the budget, consider replacing fluorescent lights with full-spectrum bulbs instead. Studies show that students who work in natural lighting exhibit better work habits, improved academic performance, resistance to fatigue, and more positive attitudes.

## Start Small

Taking your classroom into the 21<sup>st</sup> century shouldn't be overwhelming or expensive if you start with small changes. Look for [grant opportunities](#) to engage in a better technological space for student research and learning. Create a flex station for creative projects or relaxing study.

Physical changes, bolstered by small steps toward the necessary technology infrastructure and the incorporation of mobile devices or display technology, can change the way teachers and students interact in a space.