Kirksey *preK - 12*

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ARCHITECTURE SUSTAINABLE DESIGN MASTER PLANNING INTERIORS

academics
athletics
food service
libraries
performing arts
technology

assembly
fine arts
laboratory
music
play
vocation

What inspires students to learn?

What helps educators deliver their lessons most effectively?

How can architecture positively influence these factors?

These are a few of the considerations that we, as architects, research when designing schools — long before addressing the details of program and scope. We consider these factors, such as learning styles, teaching/learning/working environment, and teaching styles, methodologies and philosophies, to be fundamental to the design of each school and campus.

To glean a better understanding of these fundamentals, which vary from campus to campus, the Kirksey preK-12 Team has identified six essential factors that drive our design process:

Research. How do Architects learn?

Integrated Design. How do we engage you?

Performance. How does building performance correlate to student performance?

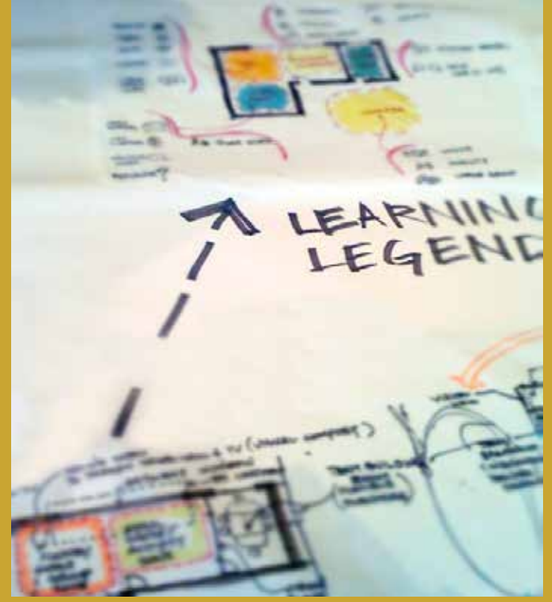
Community. How does engaging the community influence learning?

Technology. What is a smart building?

Ergonomics. How do movement, play, and comfort affect learning?

Architecture should not dictate, but rather facilitate learning.

Nicola Springer, AIA, LEED AP - Kirksey preK-12 Team Leader



Research. How do architects learn?

Good design comes from incorporating the needs of the students, their teachers, and the school administrators. In an effort to better understand these needs and the different styles of both learning and teaching, Kirksey conducts ***Classroom of the Future*** workshops, engaging students, teachers, administrators and parents in an effort to gain empirical information on how the school of the future might work. Although future-focused, the input and ideas expressed at these workshops teach us much about **how to improve today's classrooms.**

Away from the typical classroom setting, the workshops are held on the Kirksey campus and allow participants to collaborate with architects to explore their vision for the classroom of the future. In this environment, a 4th grader's idea of what inspires her to learn is just as important as her teacher's. It is precisely this type of personal fact-finding and information-gathering that educates us and allows us to design better schools.

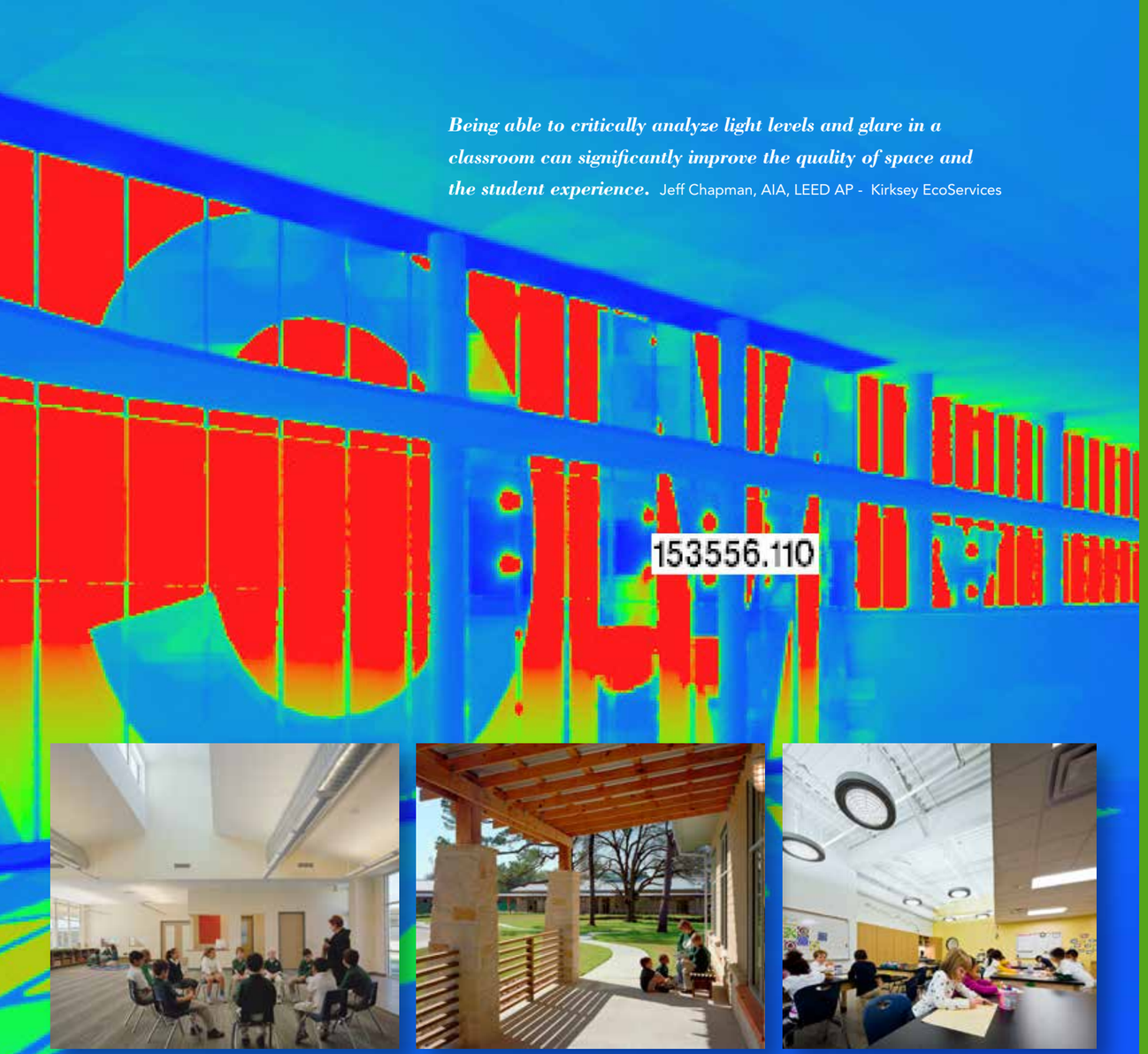
Because the polar ice caps are melting, I think it would be good to make a classroom on a floatable surface so that the kids can stay there and not have to move. Iris Stringer Graeve - 5th Grader

Integrated Design. How do we engage you?

Integrated Design, also called Participatory Design, is simply involving all of the different groups who will use or manage the building — students, teachers, administrators, parents, community — in the design process. This participatory approach allows the formerly separate entities of client, user, and building team to better communicate to achieve the goals of the project more efficiently and with greater success. Thus, the Integrated Design Team engages a much broader spectrum of participants than just the Building Design Team. Kirksey's Interactive Design Team also includes our EcoServices group, a specialized team at Kirksey who focuses on sustainable design solutions.

To facilitate the Interactive Design process, Kirksey hosts visioning workshops with the Integrated Design Team using descriptive image and word cards to easily (and visibly) engage all stakeholders, generate discussion, and allow visual alignment of goals. During these visioning sessions, we are able to establish sustainable design and/or certification goals. Kirksey's regional leadership in sustainable architecture — more than 26 million square feet of LEED projects, both new construction and existing buildings — **allows us to target the LEED points and/or CHPS certification criteria that make the most sense for the district's or board's goals and budgets.**

Being able to critically analyze light levels and glare in a classroom can significantly improve the quality of space and the student experience. Jeff Chapman, AIA, LEED AP - Kirksey EcoServices



Main image (above) Glare Study of the YMCA

Analyzes light levels at various locations within the building; used to determine level/extent of glare, allowing design adjustments as needed to minimize glare.

Performance. How does building performance correlate to student performance?

High-performance schools yield high-performing students and teachers. Years of research have proven the positive impact of simple, yet vital design elements such as natural light, proper ventilation, and low-emitting materials in improving student test scores and overall performance. In addition to these elements, architecture can be an integral part of the learning process, inspiring and teaching students and instructors alike. Thus, the school building becomes a tool for learning.

Sustainability and green design — whether designed, certified, or verified through LEED® or CHPS — have made great strides in becoming more achievable in recent years. When taken into account with a payback analysis, the cost premiums once associated with green buildings are now quite minimal and in most cases, **pay for themselves in an average of 3 years.** Perhaps the most relevant benefits of a LEED or CHPS certification for our educational facilities are **improved academic performance and reduced operating costs.**

Whether the goals of the school are to achieve LEED certification, CHPS recognition, or just to perform more efficiently, our EcoServices team has developed benchmarking and analysis tools to help quantify the resources conserved as a result of a thoughtful, **integrated design approach.** As we say, "if you can't measure it, you can't manage it."

Employing advanced technologies such as energy modeling, daylight analysis, site and climate analysis, sustainability master planning, glare analysis, natural ventilation for mixed-mode spaces, and payback analysis, we are able to design your school with a clear picture of how well it will perform. Because our EcoServices team has spent years researching these technologies and their corresponding effects on occupant performance and well-being, project costs, operating costs, and the environment as a whole, we are able to provide school districts and school boards with accurate performance statistics on proposed projects very early in the design process.

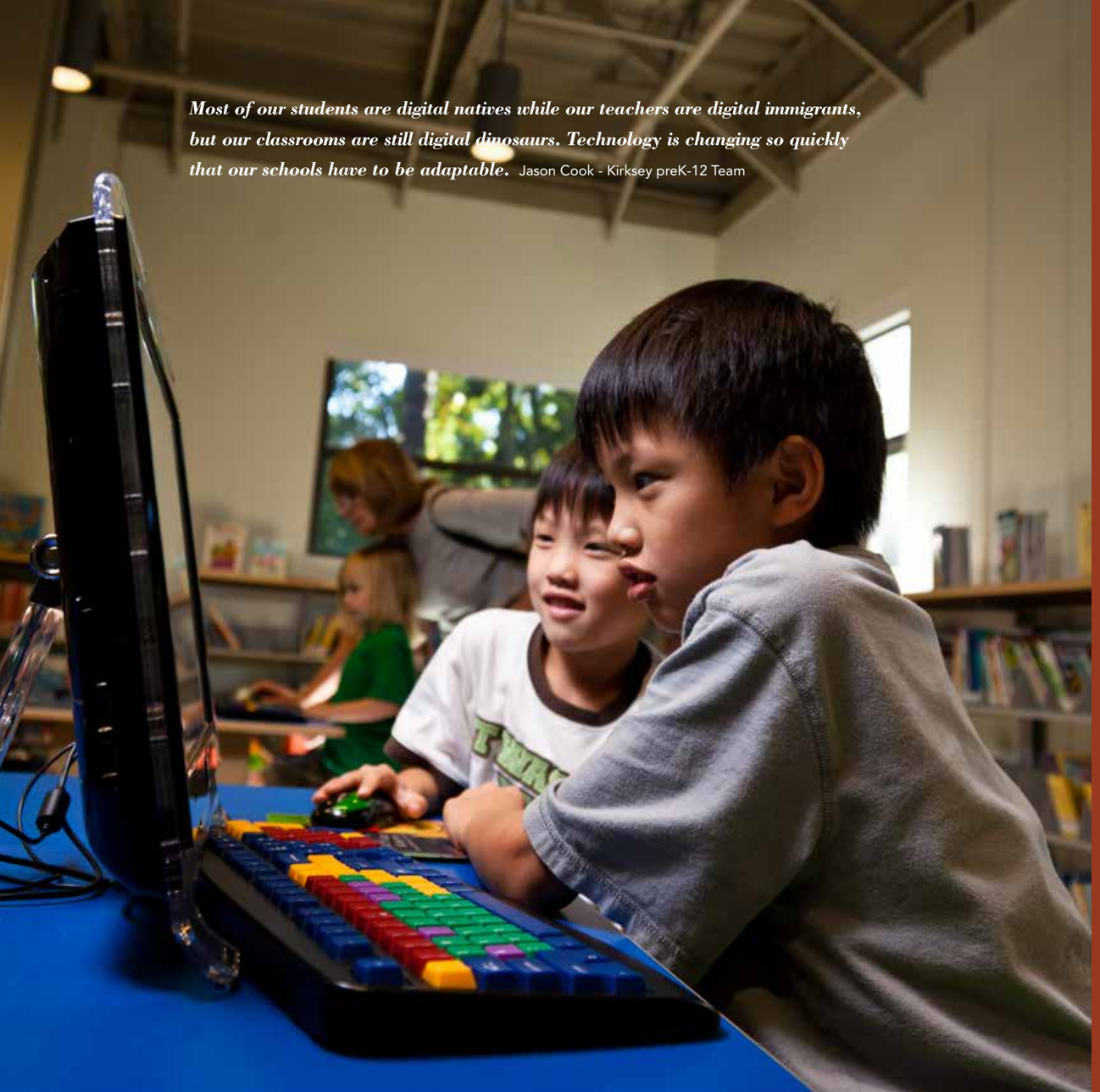
LEED, or Leadership in Energy and Environmental Design, is an internationally-recognized green building certification system developed by the U.S. Green Building Council.

CHPS, or Collaborative for High Performance Schools, aims to facilitate the design, construction, and operation of high performance schools, and provides two programs for review/certification (Verified and Designed).

I want a large display area for showing student work. Especially with project based assignments, it is important for the community to come in and see what the students are doing. Sonia Greiner - Educator

Community. How does engaging the community influence learning?

While educating our youth is the primary function of our school buildings, they likewise serve the community-at-large as venues for educational, social, and recreational purposes. Community involvement in planning a new school can be likened to a quote from Winston Churchill, who said "We shape our buildings; thereafter they shape us." Involving the community in the design process informs our design of school buildings, whereby shaping our learning spaces. Thereafter, these learning spaces shape the community.



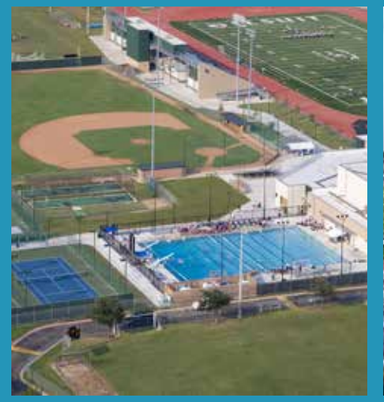
Most of our students are digital natives while our teachers are digital immigrants, but our classrooms are still digital dinosaurs. Technology is changing so quickly that our schools have to be adaptable. Jason Cook - Kirksey preK-12 Team

Technology. What is a smart building?

Without question, technology and innovation have helped us make great strides in productivity and communication, which directly affect the way we work and learn. Kirksey understands that technology used in today's classroom may be different from that in five years, and will differ drastically in 10 or 20 years. Knowing the importance of technology's role in teaching and learning, we design schools to incorporate today's technology while remaining flexible to accommodate new technologies. Thus smart design creates smart buildings.

To elaborate, "smart" design is achieved through the Integrated Design process and through Building Information Modeling (BIM), which essentially is a common virtual work platform allowing real-time collaboration among the building team (architect, engineers, contractor, consultants) within a single, "master" building model. BIM identifies potential errors early in the design process, allowing quick remedy through the model rather than a costly and time-consuming change order process. Additionally, because all building systems — structural, mechanical, electrical, etc. — and inventoried items such as finish schedules and furniture are all intricately detailed within this single building model, many school building operations and maintenance personnel have been able to successfully integrate the model with their facilities software, resulting in significant savings to school districts.

A classroom can be "Smart" in multiple ways. If the furniture is on casters, it can be rearranged so that nothing would be the same two years from now. Jerri Nixon - Administrator



Ergonomics. How do movement, play, and comfort affect learning?

Healthy, active bodies foster healthy, active minds. Movement and play, both indoors and out, are vital components of learning and often positively affect academic and creative learning. Kirksey has designed a multitude of sporting facilities, play fields, playgrounds, gymnasiums, natatoriums, fitness rooms, and special needs recreational spaces for students of all ages.

Studies have also shown that personal comfort, especially when spending long stretches in sitting positions such as at a desk or in a classroom, has a direct impact on performance. As architects, we can design spaces and specify adjustable components to accommodate the varying range of student sizes, learning styles, and personal preferences. Adjustable seating and furniture configuration allow students some control over their immediate environment and allow teachers to configure their classrooms to suit their teaching style and the student's learning styles.

What's inside these four walls is the future. What better place is there than the classroom to incorporate things like sun shading, daylight devices and compact fluorescent lighting, so that these concepts become second nature to our kids? Peter Dreghorn - Parent

Your school campus. How do you get the most out of your next building project?

Kirksey's education experience on more than twenty campuses covering more than 1,000,000 sf of renovation has shown that each solution is specific to the client and context, both environmentally and economically. As a leader in sustainable design, Kirksey understands that energy efficiency is not just a goal for new facilities, but a necessary part of maintaining existing structures. With over 14 million square feet of building assessments, Kirksey can provide efficient and economic strategies for improving existing building stock and creating whole new campuses. Kirksey will address the importance of quality environments not just in the longevity of structure but the quality of life for the inhabitants.

When considering a new building project or perhaps a renovation of your existing school facilities, the following are critical components to achieving a successful planning, design, and construction process:

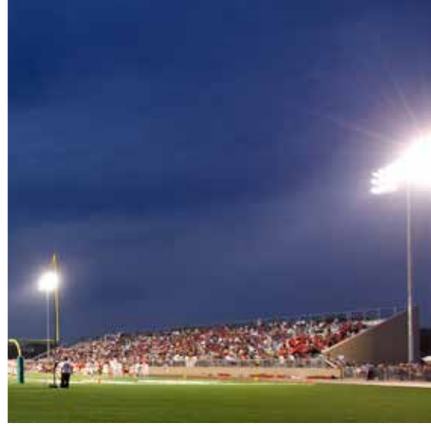
Guided early planning
Integrated Planning & Facility Maintenance Technology
Design for reduced energy & water consumption
Optimize facility energy performance
Design for environment, context and climate
Develop good stewards of the environments resources
Benchmarking
Comprehensive Facility Assessment
Integrated Design
Do more with less
Smart buildings - BIM technology

Before

After

Education Projects
Public & Private Schools

Aquatic Practice Facility, Fort Bend ISD
Armandina Farias Early Childhood Center, Houston ISD
Austin High School, Houston ISD (renovation)
Awty International School
Bear Boulevard School for Early Learning, Spring Branch ISD
Bellfort Early Childhood Center, Houston ISD (renovation)
Beth Yeshurun Day School (renovation)
Burbank Middle School, Houston ISD (renovation)
Congregation Beth Israel, The Shlenker School
Conroe High School, Conroe ISD
Duchesne Academy of the Sacred Heart
Durham Elementary School, Houston ISD (renovation)
Emery/Weiner School for Jewish Education
Gabriella Mistral Center for Early Childhood, Houston ISD
Gentry Junior High School, Goose Creek ISD
Hamilton Middle School, Houston ISD (renovation)
Herod Elementary, Houston ISD
Hopper Elementary School, Goose Creek ISD
Jefferson Elementary School, Houston ISD (renovation)
Kickapoo Tribal School (K-12)
Lion Lane School for Early Learning, Spring Branch ISD
MacArthur Elementary School, Houston ISD (renovation)
Martin Luther King, Jr. Early Childhood Facility, Houston ISD
Ninfa Laurenzo Early Childhood Facility, Houston ISD
Poe Elementary School, Houston ISD (renovation)
River Oaks Baptist School
South Transportation Center, Klein ISD
St. Anne's Catholic School
St. John's School
St. Martin's Episcopal School
St. Thomas High School
Strake Jesuit College Preparatory
Tallowood Baptist School
The John Cooper School
The Kinkaid School
The Monarch School
The Parish School
The Post Oak School
Tiger Trail School for Early Learning, Spring Branch ISD
Trinity Episcopal School
Wildcat Way School for Early Learning, Spring Branch ISD
Wilkerson Intermediate School, Conroe ISD
Woodlands Christian Academy
Yellowstone Academy





Kirksey
ARCHITECTURE

6909 Portwest Drive
Houston Texas 77024
713 850 9600

kirksey.com
TX Registered Architect #5236

For more information, contact
Nicola Springer, AIA, LEED AP
nicolas@kirksey.com.