



Greenville County Schools
DR. PHINNIZE J. FISHER MIDDLE SCHOOL

An Innovative Approach: Full STEAM Ahead!

VISION

DR. PHINNIZE J. FISHER MIDDLE SCHOOL



After the industrial revolution, as formalized education grew, the one-room schoolhouse slowly developed into a mass production model delivered in an autocratic format. Today, schools are facing new challenges for the 21st century – an evolving economy, a global marketplace, and revolutionary technological and sociological changes occurring in rapid and precipitous ways. These disruptive challenges demand a new type of student. A 21st Century Student – a life-long learner with the ability to adapt and collaborate, to find and absorb specialized information from a variety of sources and who is trained to identify, articulate and solve complex problems. Greenville County Schools in northeastern South Carolina approached this challenge by first examining what skillsets were needed to compete in the 21st century. A strategic planning group drew upon national and international research and best practices to determine how to create a paradigm shift in current teaching standards for their district. The goal was to develop educational specifications and programs that would encourage curriculum integration and collaborative learning opportunities in an organic manner within the learning environment. For eight months, the group, led by the district and consisting of curriculum specialists from every discipline, worked with an international programming consultant and regional architectural firm to challenge the status quo. By choosing to re-imagine the most fundamental element

of education – the pedagogy itself – they were able to develop a new delivery model for the application of teaching principals. Only then, did they begin the revolutionary process of designing a facility to support that pedagogy and finally, create educational specifications that integrated a STEAM based curriculum to effectively prepare students for an evolving world. The program and school design was centered on four Key Principles:

1. A Facility of Inquiry
2. Learning Across Disciplines and Grade Levels
3. Flexibility and Agility
4. The Neighborhood and World as Campus

Today's global economy demands a different kind of student, something many school districts have recognized across the country. The STEM movement (Science, Technology, Engineering and Math) serves as the core curriculum for many of the leaders in education today. Greenville County sought to advance that curriculum one step further by incorporating Arts (and Design) and creating the first STEAM middle school in the state. Through this new facility and new methodology, Greenville will produce students that are ready for a more rigorous education and demanding careers.

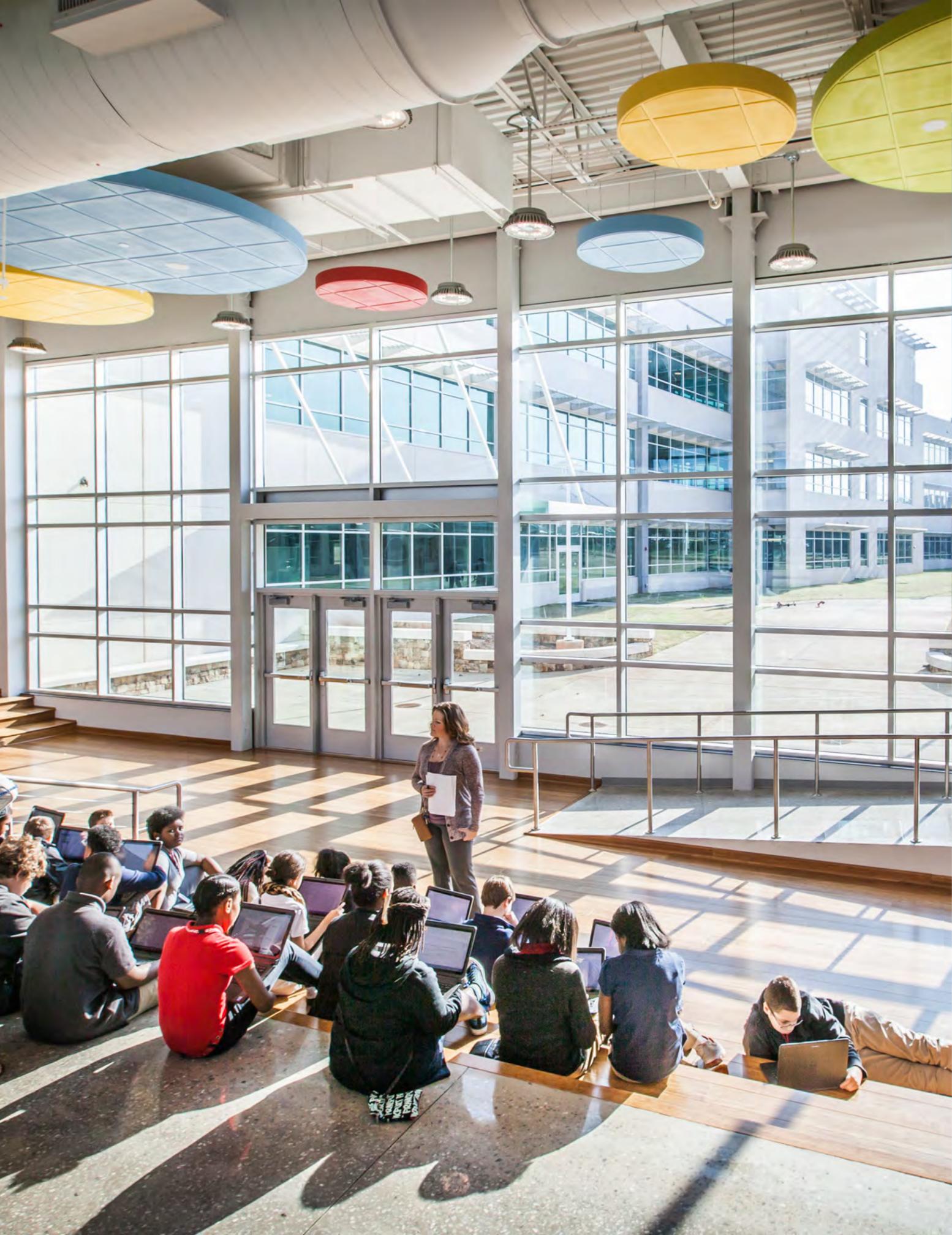
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In my very long career, this is the first time that a building has been designed to accommodate a curriculum rather than a curriculum adapting to a building.”

- Jane Garraux, Principal, Dr. Phinnize J. Fisher Middle School
from Greenville Online August 19, 2014



EXECUTIVE SUMMARY



Greenville County School's newest middle school, Dr. Phinnize J. Fisher Middle School is the first STEAM based middle school in the state, and one of the first in the nation. Not only is the school a symbol of 21st century education, the process of creating it was also revolutionary to the district's planning and facilities processes

By combining a STEM philosophy with an integrated element of arts and design throughout every subject of inquiry, the district has built a student experience more akin to Da Vinci's studio of hands-on exploration than the traditional middle school.

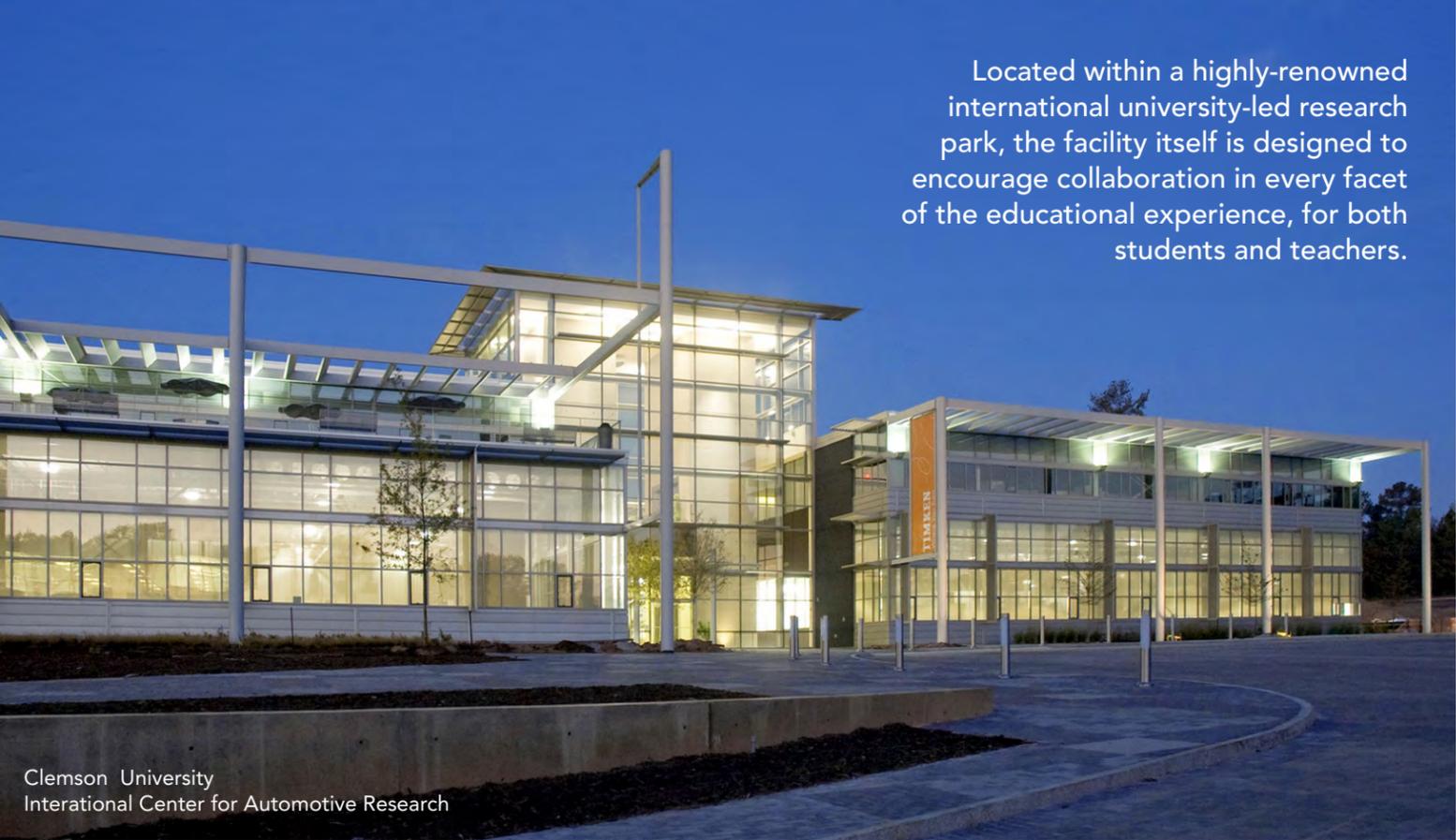
A collaborative team of key community stakeholders was chosen from multiple aspects of the school district, along with representatives of a major university partner, who then teamed with an international leader in educational space planning and a well-respected regional architectural design and planning firm. Together, this team not only created a STEAM curriculum around Project Based Learning, they then designed and built a facility that fully supports the new pedagogy.

This process of creating a school from the curriculum

out, rather than designing a new facility and shaping the curriculum to fit the physical space, questioned the most basic assumptions about how to create 21st century students. The end result is a facility unlike any other in the district, the state or much of the nation.

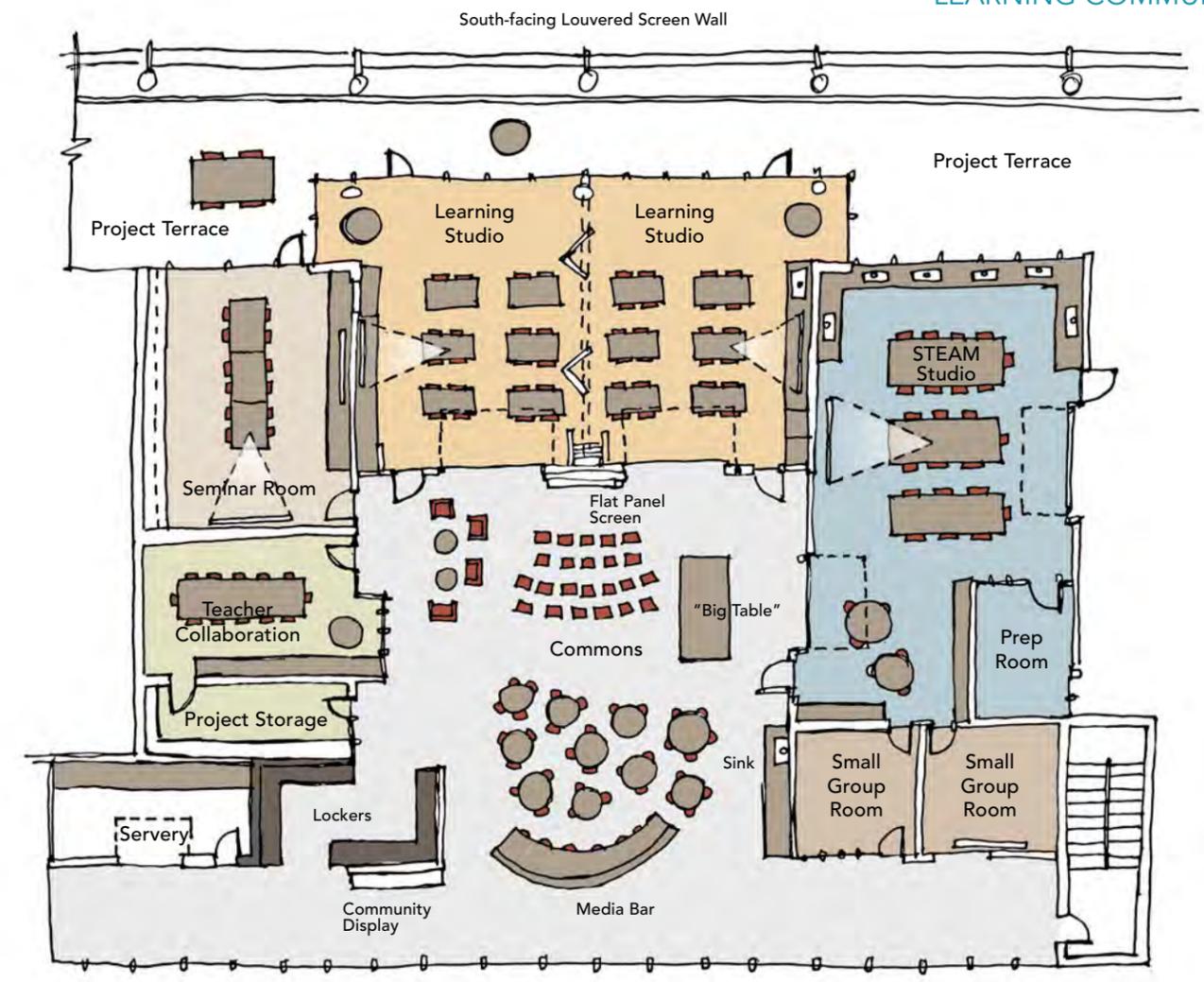
Located within a highly-renowned international university-led research park, the facility itself is designed to encourage collaboration in every facet of the educational experience, for both students and teachers. Flexibility,





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LEARNING COMMUNITY



Clemson University
International Center for Automotive Research

adaptability and creativity are designed into the very fabric of the building. The new curriculum itself is built on these tenants, facing ongoing district assessment in pursuit of continuous improvement.

Learning Communities replace traditional classrooms, flipping the status quo: Teachers no longer offer passive instruction from the front of the room, but instead facilitate active learning from among the students. These clusters of collaborative space are designed to encourage intra-disciplinary learning, and intensive group work. Students engage in projects exploring robotics, music, computer programming, and design. Business leaders mentor students, and students in turn participate in real-world projects. Throughout the curriculum, students are viewed as "makers," encouraged to use fabrication and design as part of core Related Arts and Vocational Arts elements.

Even core spaces have been re-imagined as 21st century versions of the traditional student experience. The cafeteria becomes a bistro. The lobby transforms to a community meeting room and focal point. The media center is nearly bookless in a technology-dominated atmosphere. Even the building's mechanical systems are now part of the learning environment, encouraging students to inquire how and why the built world around them works as it does.

Fisher Middle School is not only an incredible example of collaboration in the facility planning process, but is also a working case study in relationships between public school

districts and universities, civic institutions and the corporate community. Every child is involved in hands-on learning, every day. Curiosity, inquiry, creativity and analytical thinking replace rote memorization as core skills. And the entire approach has been executed in full compliance with state standards. The result is an iconic school that will serve as a national exemplar of 21st century middle school education.





SCOPE OF WORK + BUDGET

In 2010, Greenville County Schools was just completing B.E.S.T., a 10-year, \$1-billion-dollar building program that impacted 70 different facilities in the district through either renovation/addition or new construction. At the same time, as the largest school district in the state, the 42nd largest in the nation, and an area of significant population growth, the district served over 72,000 students and was faced with imminent over-crowding in five of its existing middle schools.

but a new type of school – a STEAM school designed with individual and group learning opportunities that included the surrounding university, industries and community as a broader educational environment.

SCOPE OF WORK

- AREA: 179,000 square feet
- STUDENTS: 1,000
- FLOORS: 3
- COMPLETED: 2014
- ORIGINAL CONSTRUCTION BUDGET: \$42,300,000
- SCHOOL BUDGET: \$29,400,000

After initial discussions of the goals for community and corporate engagement began during school planning sessions, administrators made a strategic change in site location for the school. A new 27 acre site was acquired on a research campus next to a leading public university research park with numerous industry and corporate partners. The facility, designed to accommodate 1,000 middle school students, serves a high poverty attendance area and accepts students from the five largest middle schools through a priority choice program, relieving capacity in surrounding areas. Fisher Middle School also serves as a significant opportunity for the district to capitalize on the momentum of a recently completed elementary school initiative, A.J. Whittenburg, the district's first STEM elementary school. Recognizing the need to continue the pipeline for project and inquiry-based learning opportunities, the district chose Fisher Middle School as the model for not just a new school,





The jobs in the greatest demand in the future don't yet exist and will require workers to use technologies that have not yet been invented to solve problems that we don't yet even know are problems."

Former Secret of Education Richard Riley as quoted in the Greenville County School District's STEAM Proposal



In a significant departure from traditional educational facility planning processes, Greenville County Schools' approach to the Fisher Middle School project was a paradigm shift – design a new curriculum first, then plan a facility to support it.

As a wholly unique endeavor, the district recognized the need for a planning team with numerous perspectives, including a range of stakeholders from the district's administration: key professionals from Facilities, Long Range Planning, Academic/Curriculum, and Technology Implementation. Together, these departments looked openly at best practices world-wide, discarding preconceptions and challenging each other to engage in meaningful exploration of new possibilities.

The School of Education within a leading public university contributed several faculty members to the committee, offering expertise and creating a professional university training component to ensure teachers would be properly

prepared for the new curriculum. A global educational programming expert was the primary lead for the discovery and programming process, based on their significant knowledge of curriculum/facility integration. The team's mission was to discover the guiding questions, opportunities and challenges that not only informed the development of the project but actually resulted in a new type of school – a project-based STEAM middle school. Then, once the new curriculum had been developed, they created learning spaces and a spatial floor plan to support the levels of collaboration, flexibility and technological integration necessary to apply project based learning methodologies.

This discovery process was a challenging step for the district's discovery team. Not only did they have to question existing pedagogy, they also had to shape a curriculum that would adhere to South Carolina's education standards from the Office of School Facilities, which at that time, used the International Building Code. By creating a new



type of school altogether, the project had to begin at the most fundamental question of educational philosophy and develop a clear vision of rationale, content focus and school mission. Discussions ranged from the nature of an inquiry-based curriculum that builds understanding to the physical arrangement of spaces that support intra-disciplinary projects. They explored multi-modal teaching practices. They benchmarked facilities nationally. And ultimately, they arrived at a list of key goals:

- ▶ **The relationship between arts and sciences would be pervasive throughout the curriculum.**
- ▶ **Students would be able to explore varied interests.**
- ▶ **The curriculum would inform the design process and the building would support the design.**
- ▶ **Technology would be integrated into the learning experience to enhance collaboration.**

Supporting the discovery process were a range of critical assets that the team was able to avail for support in their investigation. Key among these was the strength of the region's business climate. Sited immediately adjacent to the I-85 corridor in an area with a reputation for high-tech manufacturing, automotive research and development, and entrepreneurial growth, the facility's location was a significant advantage. By locating the new middle school in an existing business and research campus, the district would be able to engage a major research university,



regional technical colleges, and international Fortune 1000 businesses in the development of a 21st century workforce. Introducing concepts early on and including their input meant many of these institutions and industries became valued partners and educational advocates along the way. The team leveraged an existing atmosphere of innovation to drive an equally innovative process and create a school that benefits the individual student and serves as a catalyst for a creative community. The middle school was a key step in bridging the existing STEM elementary program into the region's high school, university and technical college systems, and eventually the workforce, raising standards for intellectual and social change in a state not recognized for strong educational pursuits.



EDUCATIONAL + PHYSICAL ENVIRONMENT

Teachers are no longer a 'Sage on the Stage.' They've become facilitators to learning and the Fisher's environment supports that."

Jeff Curtis McCoy, Executive Director, Academic Innovation & Technology, Greenville County Schools

How the Environment Supports the Curriculum

At its most fundamental level, Fisher Middle School is an expression of a project based curriculum brought to life. It is a facility designed with the sole purpose of enabling and empowering individuals in the exploration of science, technology, math, arts and engineering. The environment of Fisher Middle School supports an integrated, real-world curriculum. In creating a building that embodies 21st century educational best practices, the design team truly subjugated form to function.

The resulting school is a marvel of pedagogical innovation. By embarking on a curriculum conceived to develop a new type of student, the design team not only created a facility that stands alone in its merits as a STEM/STEAM school; they created a key connection in the district's shift towards project-based instruction. Fisher Middle School is a vital component of the district superintendent's mandate to create 21st century students. It fully supports the learning environment established at the elementary level in the newly opened A.J. Whittenburg STEM elementary. And it flows seamlessly into the New Tech academies already being established at several district high schools. It is the bridge to a complete modernization of curriculum, teaching philosophy and student experience.

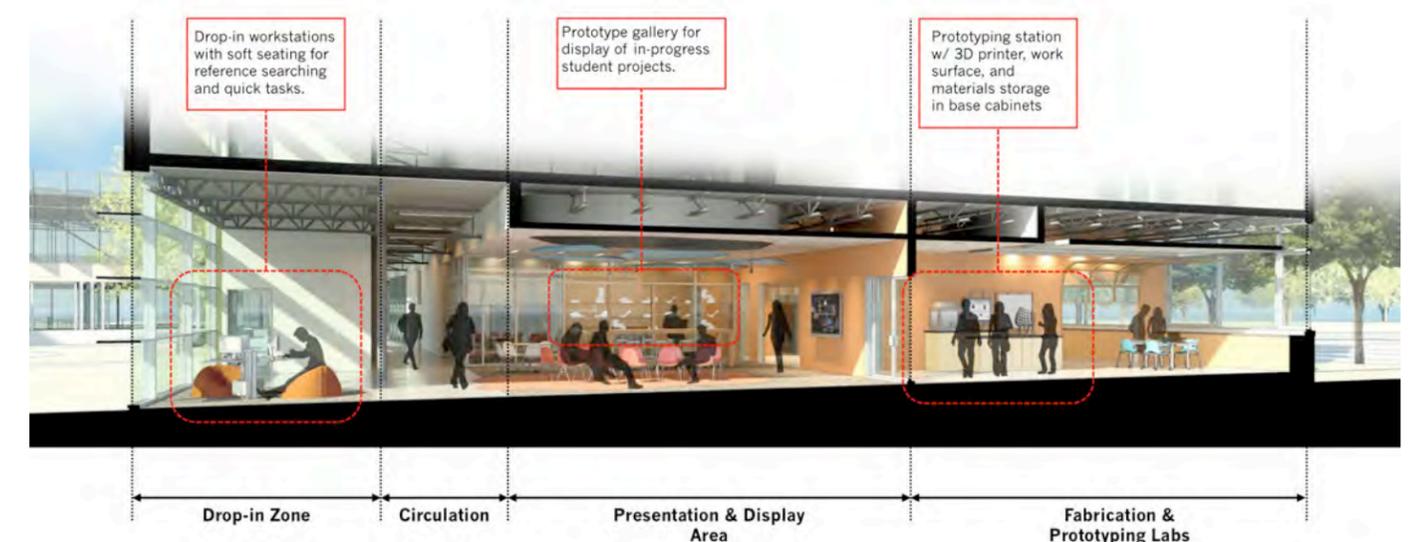
To better understand the nature of the facility and how it supports the curriculum, we must first understand the key components of this 21st century pedagogy. Creative

thinking and collaboration are foundational elements. Into this atmosphere of innovation are introduced core concepts like effective communication skills (written and oral), adaptive-problem solving and continuous improvement. This mode of instruction is all conducted in an atmosphere where risks are rewarded, every topic is explored with global perspective, and flexibility drives connectivity. Above all, the most current technology drives experiences and facilitates interaction throughout the building. Fisher Middle School is project-based learning brought to life.

Key Elements of the Curriculum

- ▶ Focus on inquiry-based learning leading to deep understanding
- ▶ Provide multi-modal, personal and collaborative learning processes
- ▶ Integrate with state requirements to ensure compatibility

Realizing that the facility alone would not instruct teachers in the new educational philosophy, the planning team organized a robust professional education plan to ensure that new teachers would be prepared for the school. Prior to the school's opening, a carefully orchestrated series of in-service trainings were conducted, with the help and sponsorship of corporate partners. Having the right teachers and administrators on board, properly trained and fully supported was vital to the success of the mission.





The environment's support of curriculum does not end at the facility's outer walls. Rather, the school's entire context drives forward the established educational mission. By locating the school in an existing business

and university research campus, the district was able to immediately capitalize on invaluable business and community relationships. Fisher Middle School's neighbors include national recognized corporations. Perhaps the most prominent among these neighbors is a leading university's much-heralded International Center for Automotive Research. This graduate-level research facility has been recognized around the world for its leadership in driving emerging technologies and deep research in the transportation and energy sectors.

The context of Fisher Middle School shows true merit just in the corporate and civic relationships the school has been able to nurture in its first year. Mentorships, internships and financial support have all been ready and available from both its university neighbor and its corporate partners. Students are exposed to real-world problems and projects on a daily basis by actual industry and business professionals who share real-life, not textbook problems and ask for the creativity of a new generation to help solve them.



Hubbell Lighting



TD Bank Corporate Offices







EDUCATIONAL + PHYSICAL ENVIRONMENT

How the Environment Supports Learning + Teaching Styles

► The Building as a Teaching Tool

Among all its other purposes (shelter, comfort, security, inspiration, facilitation), this middle school facility is also a teaching tool. The design and planning team went to great lengths to ensure that the facility itself would educate students, making it a living part of the curriculum.

Throughout the building, pipes were left exposed, painted in bright colors, and labeled. By showcasing the mechanical systems, the building itself highlights the flow of resources through the building. Students are encouraged to understand the consumption of resources, such as energy and water, exploring how they can be better managed.

In the same spirit, structural elements like X bracing, columns and beams are prominently displayed to provide an understanding of the built environment. And, rather than hide communications and power panels per traditional logic, these elements were made highly visible, wrapped in glass paneling, and used to demonstrate and educate.

The exterior of the facility supports educational curiosity – the usual, mandatory water detention area is a bio-retention pond. By implementing natural bioswales to capture hydrocarbons and particulates, this element is not only a key part of the facility’s plan for sustainably managing stormwater; it’s also an environmental amenity that can play a unique role in scientific studies for the students.

Likewise, the school includes a large central courtyard, located between the two wings where students can engage in large-scale projects, attend lectures in the outdoor

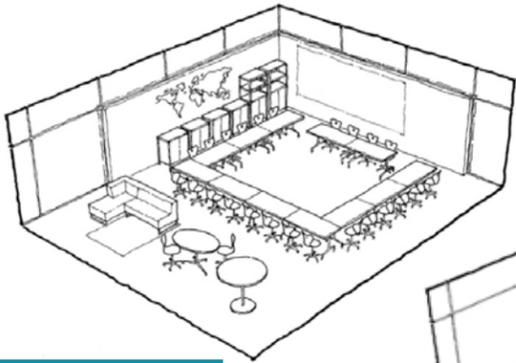
amphitheater, and engage with nature in the course of their learning. A flexible glass wall enables the main school common area to open and connect with this large outdoor space. Future additions to the school courtyard could include low-impact rainwater reclamation, a wind harvest system for power, a solar energy system for heating water, and botanical exhibits that would each support the curriculum as teaching tools. The students themselves will create, execute and monitor a landscape plan for the central spaces in the next school year.

► Flexibility and Collaboration

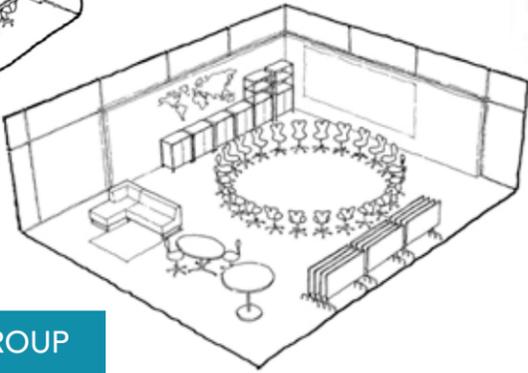
With collaborative learning as a foundational premise of the new curriculum, it was imperative that the building provide a wide variety of spaces in a range of configurations that easily and quickly adapt to the students’ needs at a moment’s notice. The structure of the Learning Communities is designed to encourage intra-disciplinary lectures, accommodate rapid reorganization of student groupings, and embrace transparency across the usual social barriers of a middle school environment.

Teachers experience collaboration as a natural part of the facility. Rather than work in their classrooms during planning periods, they share a common workspace outside of the classroom that encourages communication and cross-discipline planning.

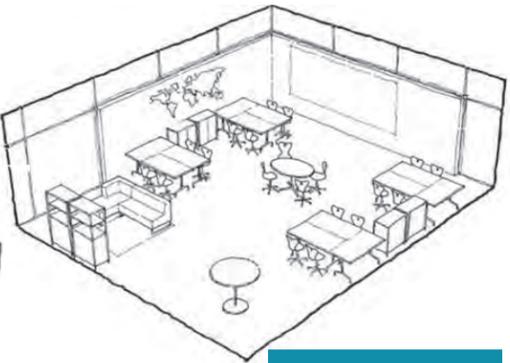
As students and teachers share spaces throughout the building on a continual basis, they are all exposed by nature to other projects, ideas and modes of inquiry. Isolation is minimized and innovation is encouraged. By arranging both students and teachers in configurations that encourage open lines of inquiry, the curriculum is set free to drive creative and critical thinking.



GROUP



UN-GROUP



RE-GROUP

EDUCATIONAL + PHYSICAL ENVIRONMENT

► Arts Integrated into STEM

As one of the first STEAM middle schools in the nation, it was important that the design team allocate special attention to the role that arts and design would play throughout the structure. Prominent galleries for student work encourage creativity and pride in craftsmanship. Shared lab-space for fabrication and design encourage cooperative efforts across a wide range of arts.

Each floor of the building includes a digital lab and a prototyping lab, encouraging students to become “makers”, not just academic theorists. Within the curriculum, there are countless opportunities for groups to engage in these lab spaces to create unique answers to real-world problems and explore their creativity.

While related and vocational arts are incorporated into every discipline, there is also dedicated space for performing arts to thrive. An entire segment of the first floor is devoted to band, music, and the visual arts. While the curriculum certainly recognizes the importance of STEM in the 21st century workplace, it also embraces a key differentiator in the role that design and artistic expression play in the development of well-rounded students with an unrelenting quest for knowledge and exploration, much like Da Vinci’s own studio.



Physical Attributes of the Environment

The facility’s design is a hallmark of the resourceful use of space and materials. The design team used an International Style of architecture with open, flexible spaces that serve numerous uses with minimal adaptation required. The sweeping glass facades, exposed steel and sharp planes that dominate the school’s appearance establish the facility as a peer on a campus devoted to thought-leadership and innovation. It mirrors a high touch, high technology focus of many of the business and industry partners in the area, connecting each other to common goals through physical attributes. The school does not conform to any prototypical ideas of educational facility design, but rather mirrors the real world corporate setting in which it comfortably resides. Within these soaring steel and glass walls, the floor plan is driven by the curriculum, creating spaces ideal for collaboration, creativity and innovation.

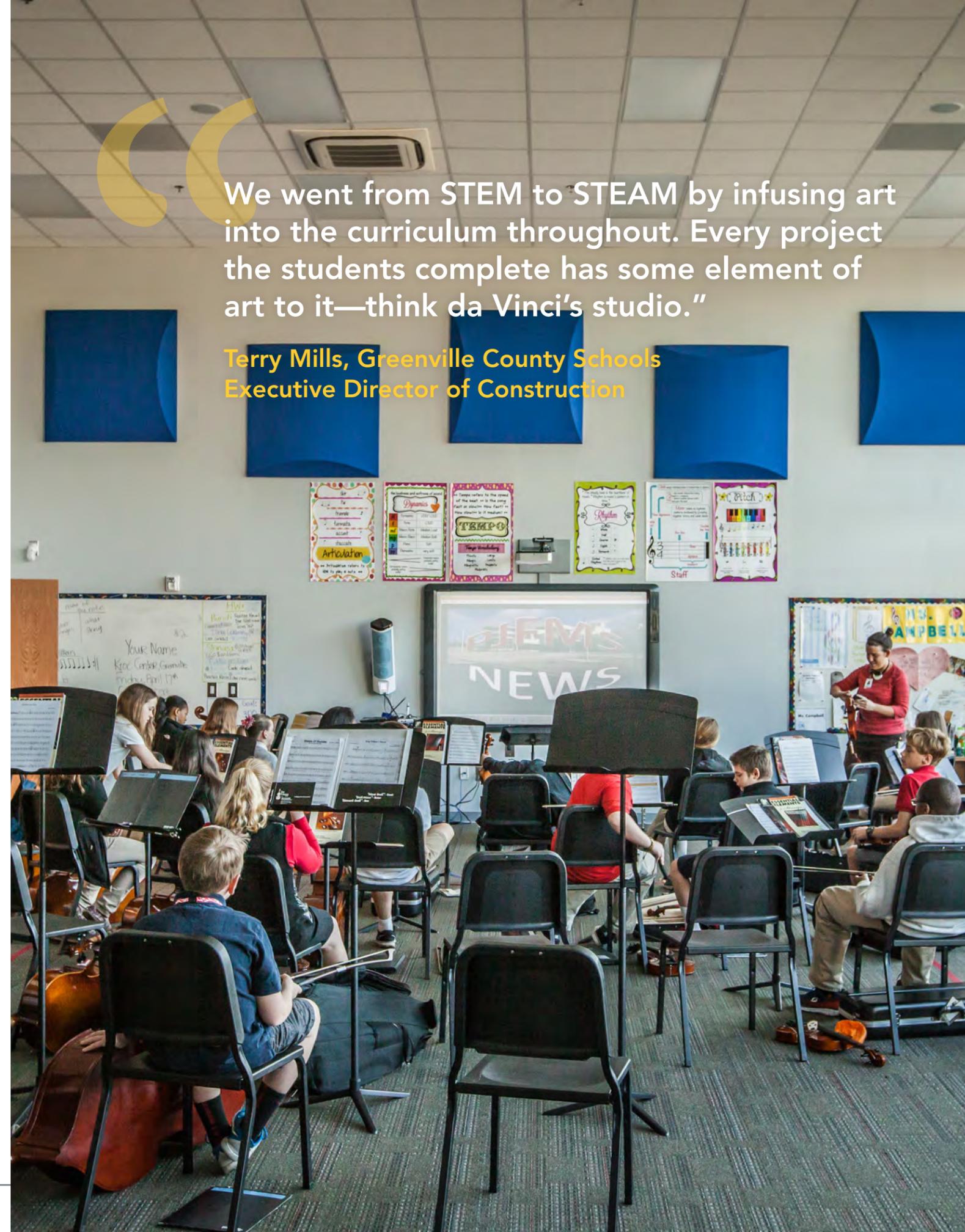
► Learning Communities – A School within a School

The configuration of classrooms in Fisher Middle School is one of the most easily recognizable differences between this building and a traditional school. The six Learning Communities in Fisher Middle School each incorporate a variety of spaces dedicated to a specific group of approximately 150 students.

The heart of the Learning Community is the Commons. This space provides multiple zones of activity, from large group presentations delivered by outside university and corporate partners to project-based exploration at large tables to individual study at the incorporated media bar. All six Commons areas overlook the central courtyard and benefit from strong natural daylight.

Connected to the Commons by a roll-up, glass garage door is the Learning Suite. Comprised of two flexible studios ideally sized for 24-30 students, the Learning Suite easily expands to create a larger space for accommodating up to 100 students.

A Seminar Room provides space for smaller groups of up to 20 students to discuss debate and develop ideas around a conference table. This quieter space encourages focused work for individuals and small groups. The Seminar Rooms are each equipped with flat-panel screens that allow teachers to connect students with experts from around the world via videoconferencing. These rooms also include



We went from STEM to STEAM by infusing art into the curriculum throughout. Every project the students complete has some element of art to it—think da Vinci’s studio.”

Terry Mills, Greenville County Schools
Executive Director of Construction



EDUCATIONAL + PHYSICAL ENVIRONMENT



high-performance work stations that allow the space to double as a Technology Lab.

Teachers, no longer bound to individual classrooms, now share a Collaboration Suite designed for five to six teachers. These private spaces have broad views of the Commons area and restroom areas for supervision, and teachers use specially built carts to transport their instructional materials to the appropriate space for a lecture or project.

Furniture and material finishes were selected with maximum flexibility in mind. Teachers and students can easily reconfigure the arrangement as needed, with little time lost to changing rooms. Seating rolls on castors. Amoeba-shaped tables fit together like puzzle pieces for larger groups or break apart quickly for smaller groups or even individual work. Technology, from fixed touchscreens to mobile devices, fills the space and is supported with abundant power drops in every room.

As the curriculum is project-based, each Learning Community also features a Project Gallery to showcase finished projects as well as works-in-progress. Students are encouraged to learn by seeing and sharing each other's work, binding the community together and driving innovative thinking.

► A 21st Century Media Center

In a 21st century learning environment, the role of the media center becomes more ambiguous. The Commons within each Learning Community assumes the role media centers traditionally play many activities requiring a larger gathering space for collaborative project work. And, as part of a pioneering technology initiative, Fisher Middle School maintains a 1:1 technology ratio. Every student is provided a digital learning device at the beginning of the school year, whether laptop or mobile device. Textbooks are largely digital, as are the vast majority of the school's library resources.

So, what exactly should a nearly bookless media center actually do within a facility built almost entirely of collaborative spaces? As the design and planning team explored this fundamental question, they arrived at four key roles for this central space's contribution to Fisher Middle School's overall success:

1. A Place to Get Away

This open space full of soft seating and high tables allows for both individual reflection and study, as well as group presentations and discussions outside the context of the Learning Community. Throughout society, the idea of a "third space" has become increasingly important – somewhere other than "work" or "home" that social interaction, collaboration and discovery can occur

EDUCATIONAL + PHYSICAL ENVIRONMENT

2. A Place with Resources Unavailable Elsewhere

With the books and electronic media typically found in a school's library available anywhere in the building via technology, Fisher Middle School's Media Center has become a repository for special collections – from artifacts and samples provided by corporate partners to key texts and student projects.

3. A Place to Connect with The World

The emphasis on technology is not simply for personal instruction but is maintained in the media center on a larger scale as well – distance learning, virtual field trips and immersive learning experiences are key resources available in the Media Center.

4. A Place for Research Assistance and Instruction

As middle school students are exposed to analytical- and critical-thinking skills, many for the first time, they must also acquire robust research skills to succeed in the new curriculum. Their projects are often driven by open-ended questions designed to drive rigorous questions and deep inquiry. The Media Center has become a hub for specialized research within the school.

Because the Media Center plays such a central role in the fabric of the school's collaborative processes, the design team gave it a central role in the facility's appearance as well. Physically, the tall, rounded glass walls provide an iconic element to the overall building's character – mirroring similar rounded elements on neighboring corporate headquarter facilities. Inside, the space is well equipped with comfortable seating for collaborative



discussions, high-tables for individual work and a plethora of options for technological connectivity. If the spacious, flexible lobby serves as the heart of the building, the Media Center is the brain.

► Specialized Collaborative Spaces

While every "classroom" environment in the school's unique Learning Communities is designed to adapt to an incredibly broad range of topics, lessons and projects, there is also a need for more specialized spaces. These areas offer unique opportunities and resources to students, enriching the overall educational experience and fully supporting the STEAM curriculum.

Digital Storytelling Lab

As technology continues to disrupt the relationship between maker and audience, this tool becomes an important marriage of arts, technology and humanities. By providing a dedicated space for exploring the evolution of storytelling, the school supports articulation and communication, providing a dedication space to explore ways to share the next generation's most important stories in new and often unexpected ways.

Piano/Keyboarding Composition Lab

In addition to the traditional designated spaces for chorus, band and performing arts, Fisher Middle School includes a lab devoted to the interpretation of musical expression. Not only is it an important outlet for creativity, it offers students a chance to understand music in a specifically digital context.

Innovation Lab

As 3D printing and other forms of digital fabrication become more accessible to businesses and consumers around the world, the ability to bring ideas into physical form will become a vital part of students' success in a global workplace.

Bistro-Style Cafeteria

The traditional school cafeteria is an antiquated mass model. Fisher Middle School's cafeteria is designed to mimic the smaller group seating areas common in real-world contexts where "working lunches" and lunch meetings are everyday. Like every other aspect of the building, the cafeteria's physical form is built to drive discussion, collaboration and innovation.





EDUCATIONAL + PHYSICAL ENVIRONMENT



► Outdoor Learning Environments

The focus on collaborative learning environments was not limited to the interior of the building. The broad courtyard situated between the two wings is equally accessible and flexible as a space for instruction and project work. An amphitheater creates dedicated space for lectures related to the physical and environmental sciences. The open structure of the courtyard itself is intended to create an active space for large group project work, or projects that require being physically outside.

The decision to install sod as the courtyard's only landscaping was intentional. By leaving the space as a blank canvas, the courtyard can serve as an outdoor lab. Students have the opportunity to explore botanical and environmental projects that will slowly complete the landscape and in the process engage in active instruction.

One of the most unique outdoor features of Fisher Middle School is the bio-retention pond and a robot that roams the courtyard. Traditionally, stormwater retention ponds are implemented in the least obtrusive area of the site possible. In this case, the bio-retention pond is located with convenient (but safe) access, offering opportunities to study stormwater management, environmental processes, and the science behind bioswales and other Low Impact Development techniques.

► Sustainability

Fisher Middle School has received a rating of three Green Globes through the Green Building Initiative's sustainability measurement program. The rating is roughly equivalent to a LEED Gold in the US Green Building Council's competing certification program. It is one of the first educational facilities in the state to achieve a Green Globe rating of any level, and the largest new construction project to ever do so. The school has also been certified as Energy Star Compliant.

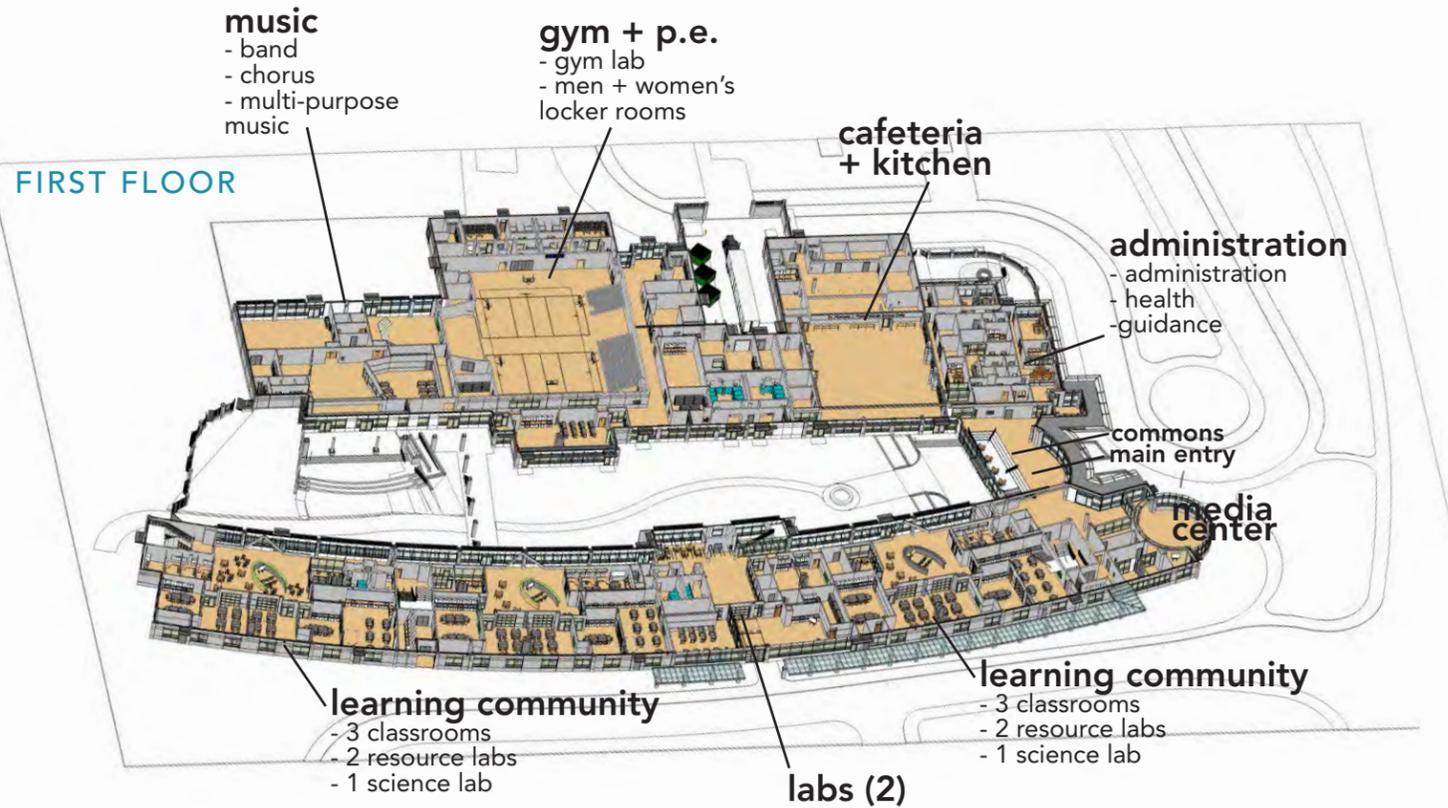
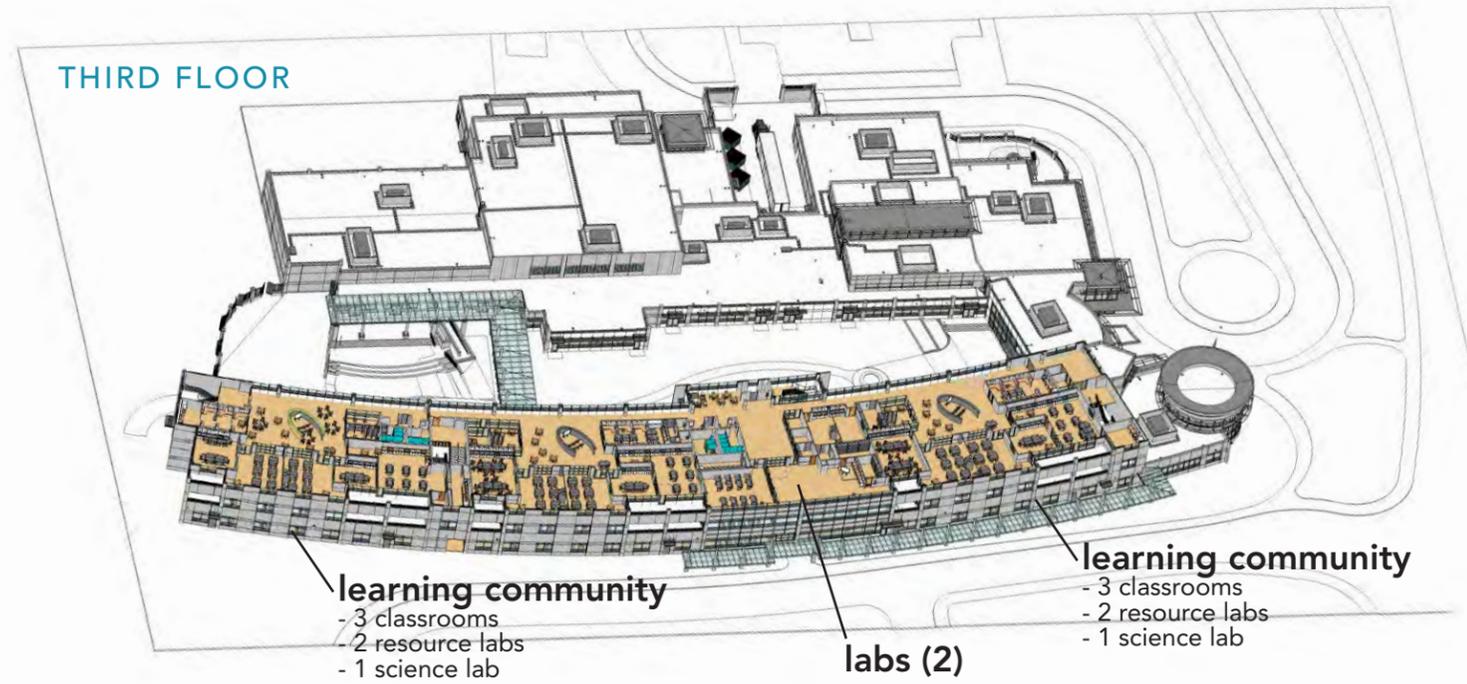
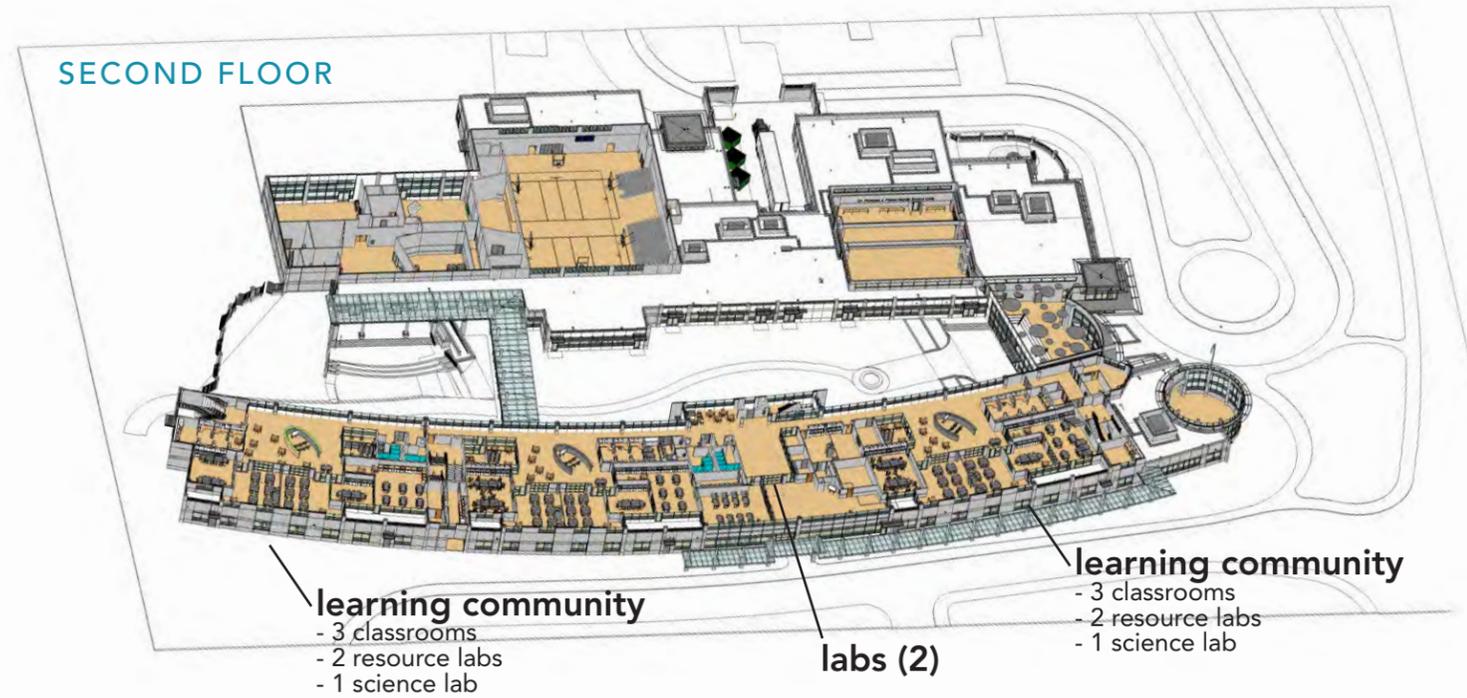
Energy-efficient and environmentally-friendly strategies were integral to the facility's planning. Many of the features that make the building itself a teaching tool, like the exposed mechanical and structural systems and the bio-retention pond, are also key aspects of the building's sustainability.

The building's location made use of an existing site, preserving much of the surrounding forest. The large volume of glass used in the iconic International Style architecture provides significant daylighting to students and faculty. Supplementing the daylighting is the latest self-adjusting LED system, provided by a new corporate partner as a testing location for their products. Other key initiatives include a smart-metered irrigation system, dedicated outside air systems, a bipolar ionization ventilation system to clean inside air, and variable refrigerant flow technology to heat and cool the facility efficiently.





SITE PLAN



EDUCATIONAL + PHYSICAL ENVIRONMENT

The Facility in Context of its Community

As a small cosmopolitan city tucked into the foothills of the Blue Ridge Mountains, this area was once a powerhouse for textile production. The region has re-invented itself over the past several decades, developing a passion for entrepreneurship, an acceptance of diversity and creative thinking and a reputation for its strong work ethic.

Today, the area has a marked European influence to its culture, architecture and development. Strong growth in high-tech manufacturing, research and technology have driven it to the forefront in a state that has consistently ranked highest in the nation for per-capita employment by foreign-owned firms. In this context, the need for a school focused on the development of a global workforce makes perfect sense.

Just as clearly, this is the perfect context to model a project based educational curriculum and facility needed to create such a workforce. The significant international economic investments in the area have resulted in countless global businesses that are ready and willing to partner with the school. Strong civic and cultural institutions provide solid footing for a STEAM school with a strong focus on arts integration. A top research university, ranked as a Top 20 Public University nationally, has provided on-going support in developing and implementing a new STEAM curriculum. Likewise, their world-renowned research park is an active partner in enriching the opportunities available to students at Fisher Middle School.

How the Project Inspires and Motivates

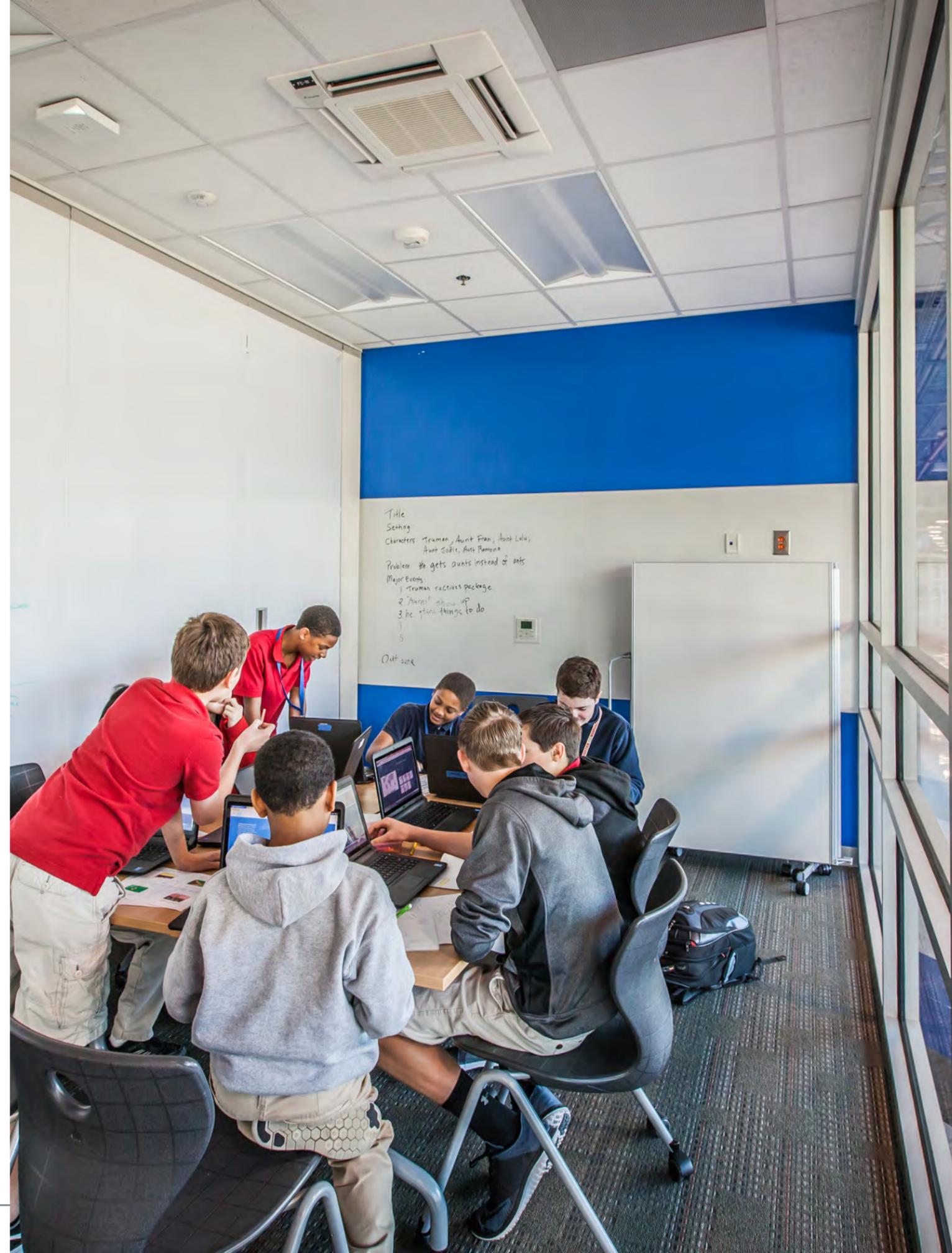
When the whole world is your classroom, how can you fail to be inspired? Fisher Middle School is more than the sum of its innovative physical environment and curriculum – it's the gateway to learning. Students are daily motivated to connect with others around them. They're measured by their ability to analyze, create and collaborate. An emphasis is placed on soft skills and communication, as important as access to knowledge.

In a school where disruption of the status quo is part of the mission statement, it's easy for middle school students to get excited about learning. Kids are not static learners but active participants with an outlet for their energy and the means to leverage technology into the collaboration process. They learn from each other, from the teacher as facilitator, and from the exposure to a world beyond their walls through technology and corporate partnerships. The physical environment creates spaces that engage, inspire and reward interaction.

Students are given a realistic understanding of what they will need to succeed in their future workplaces. They will see firsthand the value of 21st century skills in a technology-centered world. On any given day, students may hear from a business leader about a high-interest, real world problem, participate in a poetry slam, present a group project, and compose a song. Most importantly, students are given the chance to take responsibility for their own learning and can use their preferred learning style to grow and achieve at a pace that matches their interests and capabilities.

“The jobs in the greatest demand in the future don't yet exist and will require workers to use technologies that have not yet been invented to solve problems that we don't yet even know are problems.”

Former Secret of Education Richard Riley as quoted in the Greenville County School District's STEAM Proposal





RESULTS



How the Project Achieves Educational Goals

Fisher Middle School's goal is to involve each and every child in "hands on learning" every single day. The building supports the curriculum in the pursuit of this goal through careful adaptation of flexible spaces to individual and group learning methodologies. By starting with an inquiry-based, multi-modal curriculum and then building a school that supports a project based learning concept through its design and implementation, Fisher Middle School is able to offer a rigorous, well-rounded STEAM education.

Students are actively engaged, not by the curriculum alone or by the environment itself, but by the sum of the experience. Together these elements work together to drive trans-disciplinary problem solving, discovery and exploratory learning. Students are empowered to learn academic content and practice 21st century skills like collaboration, communication and critical thinking. They create high-quality, authentic products and presentations. They interact with business and community leaders on real-world project applications and case studies. And they discover the confidence and knowledge necessary to succeed in a global marketplace

How the Project Achieves District Goals

Fisher Middle School is a distinctive turning point for the school district's long range planning initiatives. It is a key stepping stone in their K-12 continuum: STEAM-literate

high school graduates. Not only does the district need Fisher Middle School to establish continuity across the K-12 spectrum, but also to prepare students for the challenges of high school, advanced education and the workforce. Leadership has recognized that the knowledge necessary for success today may not be the same required of tomorrow's workforce. Analytical thinking, clear communication, and the ability see problems through intra-disciplinary lenses are going to continue to be vital to success.

How the Project Achieves Community Goals

Education drives innovation. Our local community is strongest when we acknowledge the global forces of an international perspective on the complexities of life. Innovation and collaboration are the keys to creating solutions to the challenges facing the world of tomorrow. Creating students who are truly life-long learners and problem solvers, those who think differently and question the status quo will develop an inquisitive mind, a cross-disciplinary vision, and a desire to contribute positively to the community in which they live. The new school concept will meet the immediate workforce needs of surrounding business and industry with a creative class. In a broader sense, it will create generational change and a positive and diverse community that values life-long learning.