SOUTH STEM SCHOOL
EDUCATIONAL SPECIFICATIONS
OCTOBER 2018
Table of Contents

Acknowledgements ..................................................................................3

Lab Participants .....................................................................................5

District Mission, Beliefs, & Value Statements ........................................6

Vision & Objectives for South STEM School .......................................6

Process & Timeline ................................................................................7
  • Curriculum Leaders Interviews .....................................................8
  • Business Advisory Meeting ............................................................9
  • Planning Lab ...................................................................................12
  • Community Meetings ....................................................................19

Educational Specifications
  • Site Issues ......................................................................................21
  • Program Area Narratives ...............................................................24
  • Compilation of Space ....................................................................29
  • Spatial Relationships & Adjacencies ..............................................34
  • Site Plan ........................................................................................36

Appendices .............................................................................................37
  • Appendix A: Planning Lab Details ................................................38
  • Appendix B: Community Meetings Full Responses ....................44
Acknowledgements

Cooperative Strategies extends our appreciation to the Fulton County School District for commissioning these educational specifications and for its cooperation to make this possible. We also thank the following groups.

**School Board**
- **Linda Bryant**, President, District 4
- **Linda McCain**, Vice-President, District 5
- **Katha Stuart**, Board Member, District 1
- **Katie Reeves**, Board Member, District 2
- **Gail Dean**, Board Member, District 3
- **Kimberly Dove**, Board Member, District 6
- **Julia Bernath**, Board Member, District 7

**Administration**
- **Patrick Burke**, Chief Operations Officer
- **David Knotts**, Executive Director of Capital Programs
- **Doug Carey**, Director of Capital Planning
- **Yalanda Bell**, Executive Director of Career and Technical Education
- **Cliff Jones**, Chief Academic Officer
- **Amy Barger**, Assistant Superintendent of Learning & Teaching

**Business Advisors**
- **Craig Lutz**, Siemens
- **Tamara Pearson**, Georgia Tech
- **Kat Reynolds**, Mercedes-Benz
- **Reginald Stewart**, ESPA Inc.
- **Maya Taylor**, South Fulton Arrow Youth Council
- **Steve Teachout**, United Technologies
- **Rorie Real**, Brain STEM Schools
- **John Reed III**, EECDC
- **David Bickham**, Bickham Innovation Center
- **Marcia Creed**, ESPA. Inc.
- **Patrice Barlow**, South Learning Center
- **Chariti Young**, Automated Logic
- **Channelle Refuge**, STEM Premier

**Cooperative Strategies**
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- **Kerrianne Wolf**, REFP, Educational Specifications Specialist

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- Bob Just, Principal
- Nathan Williamson, Associate Principal
- Sophia Tarkhan, Associate Principal
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- Susan Baker - STEM Director
- Donna Barrett-Williams - STEM Director
- Mark Elsey - CTAE Analyst
- Tonya Eaton - Work Based Learning Administrator
- Chris Matthews - Assistant Superintendent of Academic Support
- Samiah Garcia - Coordinator of School Counseling
- Amy Barger - Assistant Superintendent of Curriculum and Instruction
- Shannon Flounory - Executive Director of Safety and Security
- Patrick Burke - Chief Operations Officer
- Cliff Jones - Chief Academic Officer
- Joseph Clements - Executive Director of Facilities Services
- Alyssia Wright - Executive Director of School Nutrition
- Sam Ham - Executive Director of Transportation

- Hoke Wilcox - Director of Instructional Technology
- Tim Maley - Coordinator of Virtual Learning
- Marcus Vu - Program Specialist for Virtual Learning
- Chelsea Montgomery - Executive Director Guidance, SSW, and Psychology
- Doug Carey - Director of Architecture and Engineering
- Betsey Eppes - Coordinator of Fine Arts
- David Vandewalker - Coordinator of Performing Arts
- Heather VanLooy - Program Specialist for Instructional Technology
- Michelle Easley - Program Specialist for Instructional Technology
- Kevin Robinson - Program Specialist for Instructional Technology
- Jamie Paterson - Program Specialist for World Languages
- Crystal Flowers - Director for Humanities
- Tim Dunn - Director of Information Technology
Lab Participants

Fulton County School District and Cooperative Strategies would like to extend a special appreciation to the lab participants. The lab participants represent a broad cross section of the school community including teachers, administrative staff, parents, and community members. The lab participants had the important task of developing the Educational Specifications for the South STEM School.

The lab participants were responsible for examining future trends that will impact educational facilities and creating the educational specifications to help guide the District’s future construction of the South STEM School. A major focus of the work was to determine the educational facility requirements to meet the needs of the 21st Century learner.

<table>
<thead>
<tr>
<th>Lab Participants</th>
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<tr>
<td>Chris Balthazard</td>
<td>Nicole Ford</td>
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<td>Donna Barrett-Williams</td>
<td>Ashley Garrison</td>
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<td>Ava Debro</td>
<td>Alicia Scott</td>
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<td>Tim Dunn</td>
<td>Dr. Aaron Sims</td>
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<td>Michelle Easley</td>
<td>Mia Thacker</td>
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<td>Sonya West-Jones</td>
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<td>Mark Elsey</td>
<td>Hoke Wilcox</td>
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<td>Betsy Eppes</td>
<td>Nate Williamson</td>
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District Mission, Vision, And Values

Our Mission is to educate every student to be a responsible, productive citizen.
Our Vision is for all students to learn to their full potential.
We Believe In
- Excellence
- Trust and Honest Communication
- Common Understanding
- Personal Responsibility
- Commitment
- Academic Achievement
- Measured Results
- Continuous Improvement
- Safe and Nurturing Environment
- Involved Family, Community and Staff
- Transparency and Accountability

Value Statements
- Each Fulton County school will educate every student to his/her fullest potential.
- Fulton County will engage parents as key partners in the educational process.
- Each Fulton County school will be the preferred school for its students and parents.
- Each Fulton County school will provide greater value for each child’s educational experience when compared to top-performing public and private schools in the nation.
- Fulton County schools will prepare each student to excel in a rapidly changing global society.

Vision for South STEM School

The STEM Focused Campus is a school dedicated to providing rigorous and relevant instruction with focused interest in Science, Technology, Engineering, and Math that will prepare students for college and career readiness through academics, career-related courses, internships, and industry certifications.

Objectives for South STEM School

Objective #1:
To provide students with interdisciplinary learning experiences that are rooted in design thinking practices in STEM fields

Objective #2:
To build strategic partnerships between Fulton County Schools and the business community that will provide industry experiences and internship opportunities for students

Objective #3:
To provide students with multiple opportunities to explore STEM fields that will allow them to make informed decisions about their paths of choice
Process & Timeline

1. Curriculum Leader Interviews
   SEPTEMBER 10 & 11

2. Business Advisory Council
   SEPTEMBER 10

3. Planning Lab
   SEPTEMBER 12

4. Community Meetings
   SEPTEMBER 17 & 18

5. Board Meeting
   NOVEMBER 2018
Curriculum Leaders Interviews Summary

Interviews with FCS leaders from across the District occurred September 10 to understand curriculum delivery, facility use, and needs. These conversations occurred in approximately one hour increments to delve deeply into the current program and potential vision for future curriculum and facility implications. Participants were asked some beginning visioning questions that helped “prime the pump” for the conversations that will continue throughout this process.

Because of these conversations, draft documents were developed to share during the Planning Lab on September 12, such as a draft compilation of space, draft agenda, and presentation. Participants were also encouraged to talk with colleagues before the Planning Lab and bring those ideas to the Planning Lab. Participants at the Planning Lab further refined these documents.

These FCS leader interviews helped facilitate discussion across all disciplines and created a cohesive draft of standards which was further refined in the Planning Lab.
Business Advisory Meeting Summary

To create a robust program at the new South STEM School, Fulton County engaged several business partners. This began with a meeting on Monday, September 10 at South Learning Center where an introductory presentation was given, and thirteen area businesses were represented. The business leaders were asked to respond to a series of questions in their respective work groups. They provided feedback & suggestions on 3 topics:

1. **What are the skills and knowledge base that you look for in new hires? Describe your industry and share stories of that new hires that worked well and ones that did not.**
2. **If the District asked you to design a course that your future employee would take, describe key elements you would want to see in that course.**
3. **How do you see yourself / company / business / organization playing a role in delivering the curriculum at South STEM?**

**Business Advisor Participants**
- Craig Lutz, Siemens
- Tamara Pearson, Georgia Tech
- Kat Reynolds, Mercedes-Benz
- Reginald Stewart, ESPA Inc.
- Maya Taylor, South Fulton Arrow Youth Council
- Steve Teachout, United Technologies
- Rorie Real, Brain STEM Schools
- John Reed III, EECDC
- David Bickham, Bickham Innovation Center
- Marcia Creed, ESPA. Inc.
- Patrice Barlow, South Learning Center
- Chariti Young, Automated Logic
- Channelle Refuge, STEM Premier

The next two pages detail the responses to these questions. This list illustrates the key points from those discussions. The skills and knowledge needed in the workplace today includes:
- Ability to work with people different from themselves
- Advocate for themselves and others
- Communication skills
- Creativity
- Critical thinker
- Humility
- Initiative
- Self-awareness
- Teachable
- Presentation skills
The following are the results of the conversations had based on the 3 questions

1. **What are the skills and knowledge base that you look for in new hires? Describe your industry and share stories of new hires that worked well and ones that did not.**
   - Ability to work with people different than themselves
   - Advocate for self and others
   - Analytical thinking
   - Civic leadership
   - Communication skills
   - Computer savvy
   - Creativity
   - Critical thinker
   - Customer orientation / advocacy
   - Design thinking
   - Humility
   - Initiative
   - Intergenerational fluency
   - Iterative process orientation
   - Not afraid to fail – courageous, learn from experiences
   - Presentation skills
   - Problem solving
   - Resiliency
   - Respect for all workers
   - Self-awareness
   - Sense of business perspective & detail
   - Strong foundational skills
   - Teachable
   - Team player – collaborative mindset
   - Transfer of skills from athletic teams to classroom collaboration to workplace
   - Versatility (high E.Q.)
   - Virtual natives (high comfort)
   - Willingness to learn
2. If the District asked you to design a course that your future employee would take, describe key elements you would want to see in that course.

- Business culture
- Business fundamentals / creating a business plan
- Certifications
- Collaborative teaming
- Competency based problem solving scenarios
- Connection to real world industry & players connected to a real problem
- Customer skills
- Design thinking
- Entrepreneurial habits of mind
- Executive function
- Experience with 3D Design tools and animation technology
- Financial literacy
- Group work / collaboration
- Leadership skills for project management
- Presentation & progress reporting
- Problem solving – real problems
- Programming experience
- SWOT analysis
- Test design (measure success)

3. How do you see yourself / company / business / organization playing a role in delivering the curriculum at South STEM?

- Assist with design guidelines
- Assist with student leadership
- Building interest in industries
- Continue to refine needed skills
- Curriculum writing
- Grant writing / funding resources
- Mock interviews
- Partnerships
- Piggyback efforts in place by Junior Achievement, Destination Imagination, etc.
- Professional development
- Provide a platform to showcase skills and connect via pipeline to internships, etc.
- Provide futuristic challenge questions (“In 20 years, how will we solve X problem?”
- Research around educational neuroscience
- Sponsorships
- Wrap around services / Student support services
The all-day planning lab was held on September 12, 2018 and began with introductions, review of the agenda, and goals for the planning lab. In attendance were high school students, parents, and Fulton County Schools faculty and staff.

A visioning session was conducted by facilitating small group conversations about a variety of topics. To inspire conversation around these topics, the participants watched videos and participated in group discussions. The goal of the morning sessions was to envision what the South STEM School could be in relation to the ever-changing roles of the current instructional model, the teacher, the student, the facility itself and time constraints.

In the afternoon, the group was introduced to facility layouts and the compilation of space. The lab concluded with a wrap-up of what participants had accomplished throughout the day, as well as an explanation of the next steps that are to be taken in this process, which included two community meetings to gather feedback.

The following pages summarize the exercises conducted throughout the day. Appendix A holds the details of each exercise. This list illustrates the key points from the day’s discussions. Participants envisioned an ideal facility that focused on academic and personal success while:

- Providing a state of the art, comfortable facility that supports a variety of teaching and learning styles.
- Flexible sized spaces with access to exterior as well as plenty of glass to both the exterior and on the interior for visual supervision.
- Collaboration spaces for students, teachers, and the community.
- Curriculum would be student centered and student driven.
- Basis for instruction would hinge upon interdisciplinary activities to allow for real world application of learned concepts.
Exercise #1
Deconstructing the Industrial Model

Exercise Description
Participants viewed a short video called “Changing Education Paradigms”, by Sir Ken Robinson. In this video, Robinson argues that our model of education is “modeled on the interests of industrialization, and in the image of it.” Based on this video and statement, participants were asked:

- Do you accept this critique?
- If not, why?
- If the industrial model is not the appropriate model for our school operations today, what is an appropriate model?

Results Summary
Participants concluded that although a foundation rooted in routine, structure and process has its place for mental and physical safety and security as is demonstrated in the industrial model, new models of instructional delivery are more appropriate for 21st Century education. The new models are more healthfully rooted in creativity, passion, and flexibility. These new models support real world teaching and learning experiences that engage both hearts and mind, providing an agile schedule with an ability for students to master content. The new models should further allow for resume / brand building, virtual learning, mentoring and be more welcoming than the industrial model. The new model should offer both professional development and be supported by local and global businesses.
Exercise #2
Balancing Skill & Scale, Time & Mastery

Exercise Description
Participants viewed a clip from the video titled “Rethinking Learning with Salman Khan”, where Salman Khan, the creator of Khan Academy, introduces the idea that students on a fixed schedule may not be mastering concepts, but learning just enough to where they will pass a test. Participants discussed this video, and answered the following questions and completed an exercise to model alternatives to a fixed schedule:

• What do you think will happen to bell schedules over the next 10+ years in education? Why?

Results Summary
Discussion began by reflecting on barriers to mastery and favoritism towards self-paced learning. There was a strong desire for students to create their own destiny and be the master of their own path.

Our Education System
“Everybody is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid.”

- Albert Einstein
Exercise #3
Defining the Role of the Teacher

Exercise Description
Participants viewed a video entitled “This Will Revolutionize Education”, where Derek Muller, of Veritasium, speaks about the idea that technology has constantly been predicted to revolutionize education, even though the way students are taught has not changed significantly over time. Participants were tasked with answering the following question and completing an exercise to summarize their common responses:

- Share a story of the most impactful class you have experienced as a teacher or a student create a common themes list
- Write keywords that define the role of the teacher in the examples you provided compare and summarize common themes

Results Summary
There was a robust discussion on the responsibilities of a teacher with an eye toward the importance of the interpersonal relationship between student and teacher. While being subject matter experts is tantamount in this STEM facility, soft skills were emphasized as a primary teacher characteristic. The role of the teacher was seen as being authentic, caring, empathetic, demonstrating integrity, being invested in students’ lives and their learning, as well as being teachers being passionate and relatable.
Exercise #4
The Facility as the Third Teacher

Exercise Description
Participants watched a video clip called “The Third Teacher”, which is based on Loris Malaguzzi’s idea that children are taught through three channels: adults, fellow students, and the physical environment in which they learn. The video addresses the need for “agility and flexibility” in learning spaces. Participants then answered the following prompt:

- Describe an ideal teaching and learning experience
- List the spaces you envision needed to support that vision
- How should each space and group of spaces function for the student and teacher?
- In other words: What will be in place in this new facility or how will instruction occur to indicate success?

Results Summary
Participants envisioned an ideal facility that focused on academic and personal success while providing a state of the art, comfortable facility that supports a variety of teaching and learning styles. This ideal facility would have flexible sized spaces with access to exterior as well as plenty of glass to both the exterior and on the interior for visual supervision. The flexibility would extend to furnishings, supplies, technology, and scheduling. The facility would have collaboration spaces for students, teachers, and the community. The curriculum would be student centered and student driven. The basis for instruction would hinge upon interdisciplinary activities to allow for real world application of learned concepts.
Exercise #5
Benefits & Challenges of Layouts

Exercise Description
Participants looked at three different school layout designs, the double loaded corridor layout, the pod layout, and the multimodal instructional layout, all shown below. A large group discussion was held about benefits and challenges of each layout.

Results Summary
With the double loaded corridor, participants found students and teacher isolated from each other in individual classrooms. Moving toward more open spaces with pods and multimodal instructional space brought its own challenges and benefits such as the ability to have contact with other students outside their immediate area as well as the potential inability to have sensory separation (i.e. being about to see and hear what others are doing during direct instruction time). The following are a summary of the benefits of each layout to build upon and challenges to mitigate.

- Collaboration
- Common areas
- Community building

- Display student work
- Ease of navigation
- Flexible
- Instructional transparency
- Mimics professional work environment
- Minimize distractions
- Natural daylighting
- Organized
- Short transition times
- Professional development
- Student centered
- Supports personalized learning
- Visual & auditory privacy
- Visual supervision
Exercise #6
Reviewing Compilation of Space, Defining Spaces, and Identifying Potential Shared Spaces

Exercise Description
Participants refined the Compilation of Space by discussing the types of spaces they would need to deliver their curriculum in the future. This further enabled participants to define the primary adjacencies of each space. Lastly, participants identified those spaces that they had listed as required space in their program area that they would see as potential shared spaces with the other program areas in the facility.

Results Summary
The suggested edits from lab participants were further refined in meetings with District administration and curriculum leaders and used in the resultant compilation of space found on page 29 of this document.
Community Meetings

On Monday & Tuesday, September 17 & 18, 2018 two community meetings were held in conjunction with Board Members’ community meetings. Presenters included Patrick Burke, COO, Cliff Jones, CAO, and Kerrianne Wolf, Cooperative Strategies Project Director. The total attendance at the two meetings was approximately 150 community members. After a short presentation about the progress of the South STEM school planning process, meetings, and results to date, attendees were asked to respond to two questions. Participants first answered the questions individually then shared their responses with small groups, followed by sharing their ideas with the room. The summaries of their feedback for the two questions follow and the full individual responses are in Appendix B of this document.

Participants were also provided index cards on which to write questions. The index cards were collected, and the community input portion of the meeting ended with answering some of those questions. A frequently asked questions document appears on the District website in response to the questions for which there was not time to respond during the meeting.

The essence of the feedback can be summarized by the following statement:
A successful STEM school will serve the whole student including aspects of physical health, mental health, emotional intelligence, and other needs.

SMALL GROUP DISCUSSION TOPIC #1: Define what a successful Fulton County STEM School is, including any community needs that are not being met currently which could possibly be solved with this program or facility.

Summary:
Respondents believe that a successful STEM school is one which integrates well with community, external partner organizations, other educational institutions and parents of students. There is also interest in integration of technology and websites. A successful STEM school will serve the whole student including aspects of physical health, mental health, emotional intelligence, and other needs. There is an interest in integrating the arts into programming to make this a STEAM school. There is also a calling for good teachers who are able to bring students to a functional level of understanding of subject matters, rather than just teaching to what tests require.

SMALL GROUP DISCUSSION TOPIC #2: What academic, academic support, and building design opportunities can be gained by opening a STEM school that serves grades 6 through 12?

Summary:
Respondents would like to see this STEM school be successful while continuing to support the other Fulton County Schools and students. There is also enthusiasm for the academic possibilities for the students. For example, a student would have time from 6th grade to 12th grade to explore various topics, or to gain a specialization on one topic. There is also continued concern regarding quality teachers and adaptability of design of the building.
South STEM Educational Specifications

Because of the meetings in this process, the following pages outline the educational specifications for the South STEM Fulton County School. Note: These educational specifications could be superseded by the Fulton County Schools Design Standards already in place.
Site Issues

These site issues should be superseded by the Fulton County Schools design requirements.

In coordination with the District staff, the Architect of Record will be responsible for location of the school on the site as well as site issues including topography, drainage, pedestrian and vehicular traffic, bus drop off and pick up areas, service entry, and safety of playground and play field areas.

Design Considerations

- Main building entrances which are readily identifiable
- All other building entrances shall be recessed or covered to minimize direct moisture run off on openings, doors and hardware
- Building orientations and configurations which conserve energy and allow for natural day-lighting and ventilation
- Utilization of exterior terraces/patios for outdoor learning areas
- Accessibility to all buildings and play areas as per Building and ADA requirements
- Identification and preservation of natural site features such as wooded areas to be used to enhance the science and other programs
- Minimize the building's environmental impact on the site, i.e.:
  - Run-off control (watershed issue)
  - Minimize excavation
  - Maintain existing trees when cost effective
  - Minimize grounds maintenance
  - Provide multi-purpose playfield
  - Exterior lighting
  - Emergency vehicle access
- Service entries
- Landscaping
- Use of adjacent properties
- Location of utility “boxes” such as electrical transformers
- Building Expansion: The planning for future building expansion shall consider grading, circulation patterns and utility stub outs.
- Canopies and Covered Walkways: Provide overhead canopies at primary building entrances. It is recommended that each loading area have a covered canopy and covered walkway leading into the building.
Canopies shall be designed to avoid roosting of birds and animals

- Exterior Mechanical Areas: Shall be enclosed with security fencing. Provide reinforced concrete slab with fenced area with proper sized pads/curbs for equipment mounting. Slope slab away from building
- Site design should follow standards of Crime Prevention Through Environmental Design (CEPTED)

Traffic Flow
- Backing up of buses shall not be permitted
- Car, bus, and service vehicle traffic must be separated
- Consider access by fire department emergency vehicles when planning site circulation
- Sidewalks shall be provided at each loading area with visible or physical “waiting” area
- Must accommodate student access to buses queuing, loading and unloading to the student drop off areas
- Provide adequate areas for entering and leaving play field
- Provide drive-up access for large items in areas such as Food Service and Custodial/Maintenance
- Separate drop-off for special education buses (site permitting)
- Separate staff parking from student parking
- Sufficient length in drop-off for bus and car stacking
- The discharge/pick-up of students at the loading zones shall be from the side of the vehicle opposite the driver and towards the building

Lighting
- Flag poles are not to be lighted
- Exterior lighting shall be controlled by the BAS (building automation system)
- Must be easy to maintain and service
- Provide appropriate lighting for courtyard, amphitheater, exterior studio/gallery
- Provide appropriate lighting for walkways
- Provide lighting that is easy to maintain and secure against vandalism

Landscaping
- Consider outdoor spaces as an extension of the classroom and opportunities for exploration and education
- Create landscaped areas that are sustainable from natural rainfall
- Low-maintenance landscaping plantings
- Places to rest and read
- Provide one 30’ flagpole that is ADA accessible
- Xeriscaping taking into consideration precipitation and mud
Parking

<table>
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<tr>
<th>Staff</th>
<th>Parking Visitor</th>
<th>Parking Student</th>
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<td>95</td>
<td>25</td>
<td>230</td>
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Sheltered Areas
- For inclement weather
- Outdoor class work
- Waiting for parents
- Before/after school activities
- Away from noise

Play Field
- The play field should be made safe & secure.
- The gymnasium should be adjacent to the exterior playfield
- One large multi-purpose field will be included
Core Academics

Students are provided Core Academic instruction in grades 6 through 12 in the areas of English, math, science, world languages, and social studies. The ideal educational setting for students would include classrooms with all technology capabilities that provide the flexibility to convert general classroom space to multi-purpose learning centers. Additional space in the form of huddle rooms is also needed for small group instruction and assessment. Ample storage is needed in all classrooms to house items that need to be locked in for security purposes as well as temporary storage for works in progress.

For Project Based Learning activities, Extended Learning Areas and maker spaces will enhance collaborative learning within grade levels and across subjects and provide space for small group and learning extensions near the general classroom spaces.

Currently, teachers use regular classrooms to plan and collaborate. Teacher planning and collaboration areas will provide ample space for grade level and subject area teams to meet with each other along with support staff in the building. This designated space will help support continuous learning, sharing and collaboration for all stakeholders.

Student Center: Cafeteria/Food Service & Library/Media Center

This space is planned for the center of the facility and should act as a “touchdown area” for students throughout the school day. This space combines the functions of the library/media center and the cafeteria. The student center should support large and small groups and break out groups. The space would be outfitted with all current technology and presentation devices. Students would be able to bring materials to work on small projects, have group discussions and appropriate access to electrical outlets.

Some decentralized administrative spaces should surround the student center for student access throughout the school day such as guidance counselors.

Library/Media Center: Fulton County Schools Media Centers are centers for innovation and information. The media center should include flexible furnishings, including mobile shelving. The space is fluid and allows for collaboration among students, connects students to the world, promotes creativity, and innovation.

- Supports students, teachers, administrators and parents in a digital learning environment.
- Provides students the ability to create 21st century end products such as videos, podcasts, webpages and other multimedia projects.
- Provides 24 – 7 access to resources.
- Combines print and digital resources in one space.
The media centers:

- Support web-based learning, student research and independent reading
- Cultivate a love of reading
- Support project-based learning
- Provide a space for faculty training, both technology and non-technology related training material
- Support personalized learning
- Provide a location for faculty meetings
- Provide a collaborative space for teachers
- Provide space for community meetings

CTE: Healthcare Science, Information Technology, and Engineering & Fabrication

Healthcare Science: The healthcare science simulation labs will provide instruction in both the clinical aspects of healthcare as well as entrepreneurial activities. The layout of the space should be conducive to offering opportunities to ideate, prototype, and test solutions that will influence multiple healthcare sectors including nursing, pre-med and health informatics. The biotechnology lab will provide a space for students to study interdisciplinary content in the areas of chemistry, technology, biology, and healthcare.

Technology: The computer science lab has a series of specialized hardware and software for each course. This lab will provide instruction for computer science, cybersecurity, game design, and computer networking.
**Engineering & Fabrication:** Engineering and Fabrication will have 2 labs with space for theory instruction as well as a wood/metal shop. These labs will have project-based learning spaces that allow for hands-on creativity as well as computer automated design. These labs will have robust maker spaces that allow for prototype designs and concrete models of engineering concepts.

**Music, Visual, & Performing Arts**

The auditorium will provide the space for music instruction and the site will also provide STEM integration through a Music Technology Lab that provides appropriate hardware and software to deliver music technology courses as well as visual arts digital media courses.

The auditorium will also allow for large group gatherings (approximately 400) as well as presentation & performance space. Additionally, there will be support spaces for the auditorium which include make-up/dressing/green rooms (as shared with locker rooms) and booths for sound, lighting, tickets, and concessions.

Visual arts will have one lab which will be “hands-on” three-dimensional work such as ceramics and two-dimensional work such as drawing and painting.

**Physical Education**

There will be a gymnasium to deliver the physical education curriculum. Students learn a variety of skills and health-related fitness components that require adequate space for movement and acquisition of skills in an open setting. Due to class size and the nature of the physical education setting, it is crucial that students are provided with enough space to freely move and utilize equipment in a safe and appropriate learning environment. Additionally, facilities and equipment need to be properly maintained to ensure student safety.

Further, students need spaces to change their clothing to meet physical education requirements for hygiene and movement activities, therefore four locker rooms are planned, one set for the 6th to 8th grade students and one for the 9th to 12th grade students. Office and storage space for all grade levels is also planned.
Administration & Guidance
The 21st century public school office space should be designed with considerations for continuous collaboration, teleconferencing abilities, privacy, and flexible spacing. As there exists a need for instructional staff to collaborate, this is also a need for school leadership and/or administrative personnel as well. Consequently, within the design of the 21st century spaces for school leaders, considerations must be made for allowing department heads to easily move about the space for planning purposes. More specifically, such spaces must be designed such that there exists a method for changing the collaborative design of the space as needed. Secondly, how often do we need to have conversations and/or communications with medical providers, psychologists, or in some cases distant parents who may in fact be deployed while serving in the military or perhaps on a distant work assignment? With this in mind, the design of the 21st century administrative spaces must also include state-of-the-art teleconferencing capabilities. Having such capabilities allows personal communication with individuals or groups via distant communication. Additionally, it provides opportunities for itinerant personnel to be included in critical conversations without leaving one site to report to another, thus saving time and effort in an already packed schedule.

Although the spaces should be somewhat open, privacy remains a focus in 21st century designs, therefore, considerations for such should be within the future educational specifications. The rationale is that there will still exist times in which confidential conversations between administrators and parents or other stakeholders must be initiated. Finally, flexible spacing capabilities are a critical part of the 21st century specifications for school based administrative offices. The flexible spacing options allow for easy transformations from smaller environments into larger environments depending upon the existing goals. In other words, providing some type of removable walls would serve the purposes of taking a space designed for 5 persons into a space for 20 persons in a matter of seconds.

Almost half of the administrative suite is offices, with some of them being centralized in the front of the facility while the remainder should be decentralized around the student center. The front office suite should also include a reception/waiting area, conference rooms, and a mail/work/copy room. The suite will also include a kitchenette which is a small space that might provide a kitchen type counter with a few base cabinets and/or over the counter cabinets. This kitchenette might also provide some small appliances such as an under-counter refrigerator, a microwave oven, water cooler, and coffee maker. The front office should also contain a nurse’s suite with cots, showers, and storage. Some school nurses like to be located adjacent to the core academic pods, and in this case, it could make sense to locate it near the healthcare science cluster. Lastly, the administrative suite should include a career center and a safe center.
Add Alternates

Should future programming and budget permit, there are spaces listed in the Compilation of Space as “add alternates”. These include space for:

- An Technology Enhanced Active Learning Maker Space
- Auditorium
- Ticket booth / concessions
- Sound booth & equipment
- Lighting booth
Compilation of Space

This compilation might flex depending on site development. Grossing factor could vary based on current construction costs. Some value engineering might be necessary to bring the program into budget.

<table>
<thead>
<tr>
<th>Program Area</th>
<th>Square Feet</th>
<th>IU</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th to 8th Grade</td>
<td>15,520</td>
<td>15</td>
</tr>
<tr>
<td>9th to 12th Grade</td>
<td>21,120</td>
<td>23</td>
</tr>
<tr>
<td>Student Center (Touchdown Area)</td>
<td>8,000</td>
<td>2</td>
</tr>
<tr>
<td>Performance, Music, and Visual Arts</td>
<td>4,000</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education</td>
<td>9,400</td>
<td>1</td>
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<tr>
<td>Administration</td>
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<td>Food Service</td>
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<tr>
<td>Custodial</td>
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</tr>
<tr>
<td>CTE: Healthcare Science</td>
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<tr>
<td>CTE: Technology</td>
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</tr>
<tr>
<td>CTE: Engineering and Fabrication</td>
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<tr>
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<tr>
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Add Alternates

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<tr>
<td>Auditorium Stage &amp; Wing Space</td>
<td>2,750</td>
<td>1</td>
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<tr>
<td>Ticket booth / concessions</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>Sound booth &amp; equipment</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Lighting booth</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Make up / Dressing Room &amp; Storage (share locker rooms - adjacent)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtotal Add Alternates</td>
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<tr>
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CAPACITY CALCULATIONS

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<th>9th to 12th Grade</th>
<th>Student Center (Touchdown Area)</th>
<th>Performance, Music, and Visual Arts</th>
<th>Physical Education</th>
<th>Administration</th>
<th>Food Service</th>
<th>Custodial</th>
<th>CTE: Healthcare Science</th>
<th>CTE: Technology</th>
<th>CTE: Engineering and Fabrication</th>
<th>6th to 8th Grade</th>
<th>9th to 12th Grade</th>
<th>Student Center (Touchdown Area)</th>
<th>Performance, Music, and Visual Arts</th>
<th>Physical Education</th>
<th>Administration</th>
<th>Food Service</th>
<th>Custodial</th>
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### 6th to 8th Grade

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<td>8</td>
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<td>World Language Lab</td>
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<td>1</td>
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<td>800</td>
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<tr>
<td>Maker Space</td>
<td>1</td>
<td>3</td>
<td></td>
<td>320</td>
<td>960</td>
</tr>
<tr>
<td>Science Labs</td>
<td>24</td>
<td>3</td>
<td>3</td>
<td>1,280</td>
<td>3,840</td>
</tr>
<tr>
<td>Science Prep / workroom</td>
<td>3</td>
<td></td>
<td></td>
<td>320</td>
<td>320</td>
</tr>
<tr>
<td>Teacher Planning/Conference Room (can be combined into 1 room)</td>
<td>3</td>
<td></td>
<td></td>
<td>320</td>
<td>960</td>
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<tr>
<td>Classroom (used as Extended Learning Areas) - apply for a variance if open, no walls</td>
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### 9th to 12th Grade

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<td>800</td>
<td>800</td>
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<td>4</td>
<td>4</td>
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<tr>
<td>Science Labs</td>
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<td>4</td>
<td>4</td>
<td>1,280</td>
<td>5,120</td>
</tr>
<tr>
<td>Science Prep / workroom</td>
<td></td>
<td>2</td>
<td></td>
<td>320</td>
<td>640</td>
</tr>
<tr>
<td>Teacher Planning/Conference Room (can be combined into 1 room)</td>
<td>4</td>
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<td></td>
<td>320</td>
<td>1,280</td>
</tr>
<tr>
<td>Classroom (used as Extended Learning Areas) - apply for a variance if open, no walls</td>
<td>24</td>
<td>4</td>
<td>2</td>
<td>800</td>
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<tr>
<td>Huddle Rooms (2 pair Can be combined into one room)</td>
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<td>4</td>
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<td>640</td>
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<tr>
<td>General &amp; Secured Storage</td>
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<td>960</td>
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<td><strong>23</strong></td>
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### CTE: Healthcare Science

<table>
<thead>
<tr>
<th># of Seats</th>
<th>IU</th>
<th>Quantity</th>
<th>SF</th>
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</thead>
<tbody>
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<td>1,280</td>
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<td>Biotechnology Prep</td>
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<td>Biotechnology Storage</td>
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<tr>
<td>Healthcare Science Lab</td>
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<td>1,920</td>
<td>3,840</td>
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<tr>
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<td>5,760</td>
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### CTE: Technology

<table>
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<tr>
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<th>Total</th>
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</thead>
<tbody>
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<td>3,200</td>
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### CTE: Engineering and Fabrication

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<th># of Seats</th>
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<th>Quantity</th>
<th>SF</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering &amp; Fabrication Lab and Storage</td>
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<td>3,200</td>
<td>6,400</td>
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<tr>
<td>Wood / Metal Shop</td>
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### Student Center (Touchdown Area)

<table>
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</thead>
<tbody>
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<td>Media Center</td>
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<td>Commons (Cafeteria) Extended Learning, Huddle, Media Center Breakout/Gathering</td>
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<tr>
<td>Office (Included with LMC)</td>
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</tr>
<tr>
<td>Storage (Included with LMC)</td>
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<tr>
<td>Telecommunications Room &amp; Technology Safe Vault (Included with LMC)</td>
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**ADD ALTERNATE: TECHNOLOGY ENHANCED ACTIVE LEARNING MAKER SPACE**

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<th>Quantity</th>
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<td>--------------------------</td>
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<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td><strong>Food Service</strong></td>
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<tr>
<td>Kitchen</td>
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</tr>
<tr>
<td>Table &amp; Chair Storage</td>
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<tr>
<td><strong>Food Service Subtotal</strong></td>
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</tr>
<tr>
<td><strong>Performance, Music, and Visual Arts</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>MUSIC</strong></td>
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<tr>
<td>Music Technology Lab</td>
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<tr>
<td><strong>Performance, Music, &amp; Visual Arts Subtotal</strong></td>
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<tr>
<td><strong>ADD ALTERNATE: PERFORMANCE SPACE</strong></td>
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<td>Lecture Area: Auditorium Seating</td>
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<td></td>
<td>4,843</td>
</tr>
<tr>
<td>Auditorium Stage &amp; Wing Space</td>
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<td>1</td>
<td>1</td>
<td>2,750</td>
</tr>
<tr>
<td>Ticket booth / concessions</td>
<td></td>
<td></td>
<td>1</td>
<td>200</td>
</tr>
<tr>
<td>Sound booth &amp; equipment</td>
<td></td>
<td></td>
<td>1</td>
<td>150</td>
</tr>
<tr>
<td>Lighting booth</td>
<td></td>
<td></td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Make up / Dressing Room &amp; Storage (share locker rooms - adjacent)</td>
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<td>0</td>
</tr>
<tr>
<td><strong>Subtotal Performance</strong></td>
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### Physical Education

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<th>Total</th>
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<td>1</td>
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<td>5,500</td>
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<td>Office / Bathroom: Physical Education Teachers</td>
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<td>400</td>
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<td>400</td>
</tr>
<tr>
<td>PE Storage: Interior &amp; Exterior Instructional Materials &amp; Equipment</td>
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<td>500</td>
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<td>Physical Education Subtotal</td>
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<th>Total</th>
</tr>
</thead>
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<td>150</td>
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<tr>
<td>Assistant Principal</td>
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<td>300</td>
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<tr>
<td>Bookkeeper with Vault</td>
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<td></td>
<td>300</td>
<td></td>
<td>300</td>
</tr>
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### Custodial

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Spatial Relationships & Adjacencies:

The illustration on the following page is a result of participants’ work in the Planning Lab as well as an evolution of the planning of the North STEM School. This is a general view of how the program areas might be laid out one next to the other. There are two potential entries into the facility, through the administration area and auditorium.

Upon entry into the facility, visitors will enter a secure vestibule before gaining access to the remainder of the building. The administration area will be both centralized at the front of the building and decentralized and distributed around the student center space. Students can then access guidance counselors and other administrators more directly and in closer proximity to the core academic areas.

The student center will consist primarily of the cafeteria/commons and library/media center functions. This will act as a common gathering area throughout the day. A mobile wall is envisioned to split the cafeteria down the middle so as to serve grades 6 to 8 on one side of the cafeteria while grades 9 to 12 are served on the other side. Both the lower and upper grades can have access to the library/media center portion of the commons through glass doors that lead from the cafeteria to the LMC.

The two pods are reflective of the two grade level clusters around which this facility is planned. Each pod contains science labs, maker spaces, world language lab, core academic classrooms clustered around the extended learning areas, as well as small huddle rooms and the teacher planning areas. The science labs are a bridge, this time from one pod to the next; this arrangement allows them to be adjacent to the other pods while maintaining proximity to their home pod.

The Healthcare Science, Technology, and Engineering & Fabrication spaces should be near the front of the facility to demonstrate the “learning on display” model. These spaces should be near the 9th to 12th grade pod, but also be easily accessible from the 6th to 8th grade pod.

The placement of the auditorium also provides space for exterior vehicle parking. The gymnasium is best placed near the 6th to 8th grade pod to deliver the physical education curriculum.

To the degree possible, all program areas should have direct access to the outdoors for their varied needs. It would be convenient for food service to have access to the outdoors for an exterior food courtyard. Additionally, having access to an exterior reading courtyard for the media center would be best.
Proposed STEM School (Fairburn) Site
APPENDICES
APPENDIX A: PLANNING LAB: Detailed Notes from Exercises

Exercise #1
Deconstructing the Industrial Model

- Advanced professional development (One-year prior training)
- Allows Brand Building
- As opposed to presenting problems to solve, allow student to solve real world problems
- Better models than industrial model include: 3DE, Junior achievement
- Beyond step by step framework
- Bridge Old and New
- Competency base model
- Connecting / businesses
- Connecting to global stage is important
- Correlating courses (History, Art, and Language)
- Culture should reflect welcoming environment
- Design model very integrated
- Digital Age
- Does the box model create communication and mental health issues? Some students feel boxed in, some cannot be boxed in
- Dual enrollment
- Factory model and independent collaborative model can be hybrid
- Field trips / internships / mentors
- Finding a balance between student interest and parent wants

- Flex learning
- Flexible
- Flexible pacing, agile scheduling, mini-mesters
- Flexible scheduling (times, virtual)
- Group students by interest
- Group students in ways other than age (interest, skill level, etc.)
- Hard to get students today to buy into traditional model
- High school students could mentor middle school students
- Higher education / college environment
- In younger grades students get Montessori, etc. and older students are boxed in
- Innovative / Master teachers
- Intentional collaboration / planning for teachers and students
- Learning is not isolation
- Less time limits & schedule (class periods)
- Leveraging the middle school connections to lead to high school pathways
- Makerspace / innovation labs
- Need to address age concern (socio-emotional) and entry point
- No wall collaboration
- Out of the box communities promote out of the box learning and life
- Partnerships
- Prepares students for college and beyond
- Provides flexibility to meet various students’ needs
• Real world learning experiences
• Scaled environment
• School now is, “Do this, do that…pass” so students are not able to persevere, students should be working for the grade…application
• STEM research classes
• Structured process, set routine focuses on community not student
• Student creations are presented to corporate officials and are changing minds
• Student should be passionate about the work
• Support from business partners

• Teacher as facilitator
• Think about norms / culture and foundation
• Time to move away from one size fits all
• Virtual Learning
• Want deeper changes, not just surface changes
• We don’t think about our spectrums because we focus on qualitative data
• Young people now are more civic-minded and want to make significant change
Exercise #3
Defining the Role of the Teacher

- Actively engaged
- Authentic / real world application
- Authentic caring and concern by teachers
- Caring & relationships
- Cognitive processing of students
- Collaborative learning
- Educational integrity
- Empathy
- Engagement
- Excited and passionate
- Facilitation by teachers
- Foster mastery – create the environment for learning
- Growth mindset moment
- Guide on the side vs. sage on the stage
- Invested in the journey set or designed for you
- Make the learning relatable
- Meeting students where they are
- Open environment – self paced
- Passion for content
- Real relationships with student – what is happening at home as well as at school
- Rigor / challenge
- Risk-takers
- Self-fulfilling prophecy (student self-reflection)
- Social engagement & collaboration
- Student accountability
- Student agency
- Student as partner, co-creator
- Student centered ownership
- Teacher as coach / futurist
- Teacher attitudes – high expectations
- Teacher centered vs. student centered
- Teachers’ words have power
Exercise #4
The Facility as the Third Teacher

- Ability to close or open walls to create smaller or larger spaces with sightlines
- Ability to eat & drink
- Access to outdoors
- Allows for creativity
- Architecture lends itself to share of space
- Athletics / personal fitness center
- Augmented reality
- Bright
- Bustling commons area were students work collaboratively or alone
- Calm colors, carpet, well-stocked
- Casual lounging
- Coffeeshop buzz
- Collaboration spaces
- Colorful spaces
- Comfortable surfaces
- Community push-in to classrooms
- Continuous redefinition of space
- Courtyard surrounded by circular building
- Decrease emphasis on grades
- Easy to move through, not a maze
- Facility evokes energy and motivation
- Facility supports student centered and student driven education
- Flexibility in size – type of instruction
- Flexibility of supplies
- Flexible
- Flexible / multiuse spaces
- Flexible scheduling (evening?)
- Flexible to allow social interaction & collaboration
- For interdisciplinary project planning
- Furniture and technology to support projects that leverage technology and share best
- Furniture is flexible and multi-functional
- Glass hallways
- Good interior traffic flow
- Green space opportunities
- Increase creativity
- Integration of food / beverage
- Interdisciplinary – tied together, practicality (the why)
- Interdisciplinary activities that allow for real world applications
- Interdisciplinary collaboration across subjects
- Interior & exterior learning spaces
- Inviting, but looks scholastic – glass
- Kids are actively engaged in hands-on learning to tackle real world problems and applications
- Lab spaces
- Lab spaces for healthcare and robotics
- Large classrooms with study carrels and nearby conference rooms
• Large windows
• Learning accommodates various sizes and groups
• Learning activated place in the hallway
• LEED certified
• Limited (less than 20) size of enclosed spaces
• Lockers have mobile charging devices
• Lots of glass
• Lots of natural light
• Lounge area with places to sit
• Mission clearly visible through design
• Mix of large group, small group, and independent workspace
• Mobile storage
• Modern, view student engagement
• Modular furniture for supplies that might move from one space to another
• Monitoring: How do adults know that students are where they are supposed to be? How are expectations set?
• Movement areas: paid interns (tech & oversee), track, community center at night and weekends
• Multi-layered whiteboards (display daily framework)
• Natural controlled light
• Need space to work in groups
• Nice relaxing teachers' lounge
• Online learning lab
• Open courtyard space
• Open to community events, family resource center, students

• Place for heating food, meet, chat
• Place identified to just socialize
• Plain walls
• Productive arguments (norms)
• PTSA room large enough to work in
• Rolling chairs
• Safe & Secure
• Seamless use of technology (charging stations, WiFi)
• See in hallways (circulation space) – collaboration /project spaces in the hallway
• Senior room
• Showcase area in front of center collaboration space
• Social media presence
• Social place
• Space for calling parents (glass cubicles)
• Space for OT, speech, psychologist, etc.
• Spaces for quiet individual work
• Structured places to be at specific times of the day
• Student centered space
• Student work – innovative thinking
• Student Zen Room
• Suited to the content area needs
• Support attempts at learning / failure
• Tables allow for creativity
• Teacher meeting / collaboration space
• Teachers collaborating together / redefining role of teacher and ownership of student rosters
• Tech for guided tours (kiosk)
• Technology / tools to support learning
• There are a variety of distinct spaces to learn
• Touchdown spaces (sign in to use other spaces)
• Updated technology

• Wing for each pathway which connects to a common area (culinary – kitchen – restaurant)
• Zen space
APPENDIX B: COMMUNITY MEETING: Detailed Notes from Small Group Discussions

SMALL GROUP DISCUSSION TOPIC #1: Define what a successful Fulton County STEM School is, including any community needs that are not being met currently which could possibly be solved with this program or facility.

- A successful FCSS is requiring strong discipline and GPA to enter no matter what
- A middle / high school options that isn’t fighting for reputation
- A school that encourages student leadership
- A school that has partnerships and collaborations with parent and students
- A school that is challenging students to be thinks with students that can compete nationally for placement into Ivy league schools that now do not look at South side students
- A successful FC STEM school is defined as a school that offers stellar programs and classes around STEM. I’m hopeful that there will be clubs, competitions, STEM partnerships, potential corporate company engagements. I’m hopeful that the school will have an energetic and skilled staff to support and educate the students to propel and exceed the STEM knowledge that the students will come into the STEM school with.
- A successful FCS looks like a school that will produce student who will go into higher education already knowing what they would like to major in. They will be prepared not only in science, but also how to still be prepared to operate with other skills such as how to budget their money, fill out a job or college application and who can also do other needed things to make it after high school and survive in the real world. Science and technology are needed, however also teach children how to survive as these systems crash. It would be wise to also teach as we are teaching how operate these systems the opposite of how things would work if these tools are not available.
- A successful FCS STEM school can work freely in expressing and designing ideas that are STEM influenced. Schools will have the resources needed for student to expand their ideas that will enhance their community. Have the school no into the community and think of thing that could help the community like recycling to help the environment and what technology inventions can be designed to improve recycling efforts in the community. For example: There is a bad odor in my neighborhood. Find out what we as a community can do to help solve the problem.
- A successful Fulton County STEM school excites both student and staff to grow academically. The cadence is built for rigorous, i.e. Project based skills that can be applicable in many facets
- A successful Fulton County STEM school would foster mentoring relationships between undergraduate students and county school students aimed at supporting student interests in the college / university of their choice.
- A successful school continually re-evaluates curriculum to adapt to workforce needs
- A successful school explores partnerships with companies that are global
- A successful school prepares students for the workforce
- A successful school should include student being actively involved in designing and problem solving. The students
should be given the opportunity to express their natural talents in these processes from what I’ve seen in the elementary school STEM lab, all the students are not actively engaged and benefiting from the STEM curriculum. I think that there should be lots of diversity when deciding what to design. The student should also be responsible for being well rounded to some extent.

- A successful school would keep students engaged in the entire educational process. It would not only focus on the STEM program but also reading and writing. There would also be opportunities for parents to be involved in the process by way of classroom involvement and other school opportunities.
- A successful STEM school has multiple STEM courses for students that align to college courses (e.g., robotics).
- A successful STEM school should include relevant business partnerships that encourage students to enter STEM fields and encourage an inquiry-based mindset. Community needs such as more nationally recognized educators in areas of STE would be met by this school.
- A successful STEM school starts with clearly defined goals and strategic steps to execute and measure success. Since “STEM” concept is new make sure parents fully understand concepts, goals, and expectations. Another important fact is information overload. Use forums that will provide great communication in one place versus different mediums, websites from different teacher and office staff. Continue to collaborate with the cluster schools and other “STEM” schools so we can start successful versus making a lot of mistake than to will impact our children.
- Address emotional needs in addition to education
- Allow entry that is not based on test scores

- Attendance is a must as well as parental involvement; parents have to volunteer 30 hours per school year for a child to stay registered
- By having a STEAM curriculum. Right now so many are teaching for the test and not for the issues of current everyday life, such as the things discussed on the business advisory bullet points. As with the North campus, an exercise room could be needed. Also, for the students left behind in regular schools, ow will they be able to advance
- Career focused guidance track for all students
- Certified science teachers
- Collaborates teachers, parents, community, students, etc.
- Collaborative effort between teachers, parents, students, faith based, community business partners
- Community and family collaboration are key
- Community needs a school of this caliber and design should include space available for the community
- Community needs: space, resources, staffing/wing for counseling, mindfulness, empathy services, yoga, wellness
- Community partnerships with science / tech / math backgrounds
- Competitive with schools in county
- Corporate meeting space that mocks professional working environment / double as community and partner engagement space as well as student interviews and training development.
- Corporate sponsorships
- Cutting edge technology is present – comparable to tech that is used and being developed in careers
- Emotional intelligence
- Energetic and skilled staff
- Engaged students
• Ensure teachers can teach (not just know) subjects and make them interesting
• Experts in STEM to come guest lecture
• Expose students to current advancements and theories
• Exposure for children not growing up in the tech advanced homes. That there are jobs and futures beyond what they may see at home or directly in community
• Exposure to career options form guests / partnerships with community, parents, businesses in area
• Hands on learning a focus in every subject
• Having a “parent university” is a major need
• High engagement for students (project based)
• High involvement from surrounding businesses that can align to the standards to provide real life experiences
• I currently work in technology and this school is very much needed. Our students are not being prepared to work in a STEM workforce.
• I definitely think this school is overdue for our community.
• I think that it should begin with forward thinkers as instructors. Perhaps instructors form industry leaders like Apple, Ford, Amazon, etc.
• I would like to see a STE(A)M school, not just STEM
• Incubator space for business and industry to train and work with students on innovative ideas. Could be an employment opportunity for students after coursework is completed
• In-school resources are a current need at the elementary and perhaps middle school level. Teachers many not have tools available related to STEM fields.
• instructors allowed freedom to teach outside of GA milestones
• Leadership
• Learning connected to outside career choices and internships that provide exposure and learning opportunities

• Maybe global instructors
• Natural light
• No learning cottages in 2 years
• Offer counseling, food and onsite tutoring
• Open concept
• Open the school up to the community. Allow adults to gain their GED. Let them take pathway classes too.
Parents would love to be more involved and is excited to have a STEM school. However, parents are not educated with the new curriculum or academic standards, but also in STEM. Families want to support their children in education but can’t because they do not understand how.

Possible have business and employment leaders
Provide tutoring when needed
Real life scenarios and visibility to school’s achievements
Rigorous curriculum
School needs to provide some ongoing interaction with community
Searches for instructors should be opened up across the county with a very competitive package
Should also include company partnerships that works hands on with school to promote the type of persons they are
Skilled & prepared staff
Spaces that encourage teamwork for projects and project management from start to finish
STEM school should be full of technology resources, books, computers to be used to teach students
Strong focus on STEM – engage the community’s strongest and brightest and propel them to academic success
Student requirements
Student with YouTube channel
Students able to address community concerns or needs
Students admitted to university
Students demonstrating proficiency in both reading and math
Students need to be prepared for technology focus of the future workplace. School needs to ensure that students are academically prepared for college and career. The community wants options for all students. A school with only 900 students will not be accessible to many children in the area.

Students progress through school at rate of performance, not age
Students starting businesses
Students that are able to utilize their skills across a variety of different settings and situations. Able to compete with other schools / students across the state and nationally. One that prepares students that are able to identify issues in the community and work with community leaders to implement.
Students who own patents
Students who participates in science / tech competition
Success would entail exposing students to a variety of STEM careers and assessing strengths in each student in order to guide them along a specific career path.
Successful education of 6-12 graders sometimes in the same class, because of topic interest
Successful STEM school has flexible seating, learning spaces, highly qualified teachers for actual STEM related fields, high student engagement, personalized learning, possible school to career pipelines (possible internships and career certifications), technology forward school (i.e. resources, devices, etc.) Interdisciplinary curriculum, appropriate metrics for success.
Teacher requirements
Teachers can teach and deliver subject
Teachers will need to be certified in STEM
Teaching life skills and make subject alive for students
Teams for students – academic and interest based
Technology should be balanced with relation / communication / behavior science (IQ vs EQ)
The South Fulton STEM School should be a community center. The career pathways offered should address high demand
careers in the local community. Provide student opportunities to work in their chosen pathways.

- The students are engaged in learning and they get the opportunity to work on real world problems. A place where they can have hands on interactions with their peers and teachers. With this facility I hope that the students can get internships/externships where they can apply what they have learned in the classroom that to me would define a successful Fulton County STEM school.

- The students at this school should solve the problems in South Fulton County such as: develop ideas that speak to the business, economic and employment needs of the community, develop programs that will attract medical and professional occupations, and work closely with aerotropolis to be sure it develops solutions to problems and challenges involved with that transportation.

- This program cannot solve for social ills that effect our schools on the south side

- This school is only serving a small group of students, so there will still be a need in the area. This school will not touch enough students.

- Trained staff with real life experiences connected to the students

- We don’t need another school. Funnel this money to our middle schools and help our school implement innovative programs

- We should be implementing STEAM
SMALL GROUP DISCUSSION TOPIC #2: What academic, academic support, and building design opportunities can be gained by opening a STEM school that serves grades 6 through 12?

- A building design that is LEED and sustainable
- A creative thinking / writing portion in the morning daily
- A STEM School focused on healthcare and technology should provide real-world experiences for students. For example, have a school-based heal center where students could intern. Have a geek squad where students could work in the community supporting technology needs. Invite local businesses to lead case studies. Partner with GA Military College to provide college level classes.
- A student who knows what they are interested in can focus on it for 6 years
- Academic opportunities = engineering, manufacturing, business management, healthcare science, information technology, communication skills, interdisciplinary learning opportunities, career skills development. Partnerships to colleges and universities, internship opportunities. What does partnership look like for elementary schools?
- Allow enough students to attend (not small number)
- Allow for direct contact with technology based local colleges
- Allow students to teach workshop for families and communities
- Allowing teachers, students, and parents to see the connection between standards at grade levels
- Allows the school to work in partnership with tech startups
- Being ready for more than academic success for the real world
- Building on prerequisite skills to best prepare students by 8th / 9th grades

- Capacity: with limited enrollment what options will be available for increased future capacity should demand outpace capacity of original design. We will need design that allows for additional learning spaces of the same caliber of the original design
- Classes on mindfulness
- Coding
- Competitive edge for children in an undeserved area – when middle and high school are fighting for resources and reputations. Children don’t have experiences provided for them at home or in direct community. Should be shown the vast array of career, people and technology are used in the world,
- Design opportunities: the fitness center should mirror North Fulton’s STEM School
- Design thinking can be mastered after these 6 years of school
- Equipping students with experiences and key sills in key along with making real-world connections beyond the classroom
- Exposure to what’s out there (space, etc.)
- Hand-on learning opportunities not just lectures
- Having a new STEM school will encourage families to stay in the South Fulton instead of leaving for private charter schools. We should encourage other traditional schools to implement design thinking and project-based learning in elementary school, so they will be prepared for STEM school
- How kids are held responsible for their own learning and actions
- How kids can be more than a test score or desk classroom test or worksheet
• I am a product of the Dekalb County school system M to M program, so every day I was bussed from South Dekalb County to North Dekalb County to attend a magnet school. I would like my children to have a quality STEM education in their community.
• I would like to see interactive boards, laptops for the kids
• Innovative area – cultural sensitivity
• Internship opportunities
• It should mirror the North Fulton plan exactly.
• It would allow students that excel in STEM to get what they need and focus on education
• Multiple opportunities to access interest and explore skills / pathways
• Need company partnership to support STEM schools.
• Nothing. It will cause even more competition and allow top tier students to leave their schools; thus hurting our schools.
• Offer teachers who are well versed to teach students
• Ongoing training for staff members to learn
• Opportunities for non-pay tutoring
• Parent academy with quarterly meetings discuss latest technology, how to use it safely and help find summer programs for students
• Perhaps entire courses or 6-week sessions taught by college professors and/or working professional in STEM
• Perhaps including a business incubator program that:
• Prepares student to launch their own tech startup
• Project based learning from research to concept to development. There needs to be a presentation development portion
• Promote scholarship, training, and resources
• Ready for college and career ready

• School design has not changed much to reflect changes in technology and society. By opening a STEM school building design can’t be adapted to meet the needs of businesses and the modern student who has access to numerous resources academically, a STEM school can provide meaningful interaction with real world scenarios and concepts that not only prepare students for college but to enter science-based careers
• Social and emotional skills
• Space welcoming to business use, integration etc.
• State of the art building that will provide the opportunity for experimental learning
• State of the art environment built to help kids dream
• STEM school would benefit the community in preparing student in their educational and career choices. College may not be for all student but educate on how even those students not interested in college can still be involved in STEM projects in their career path and serve community
• Student will be able to utilize their creativity and be open minded and be innovative
• Student with varying learning styles and interest will be served; rigorous career interest / development
• Student would be better prepared in the Tech/STEM world. Preparing student for careers and entrepreneurship
• Students can be equipped for higher education and life skills / survival skills
• Students learning and problem-solving aligning with college and university methods
• The opportunities that can be gained by opening a STEM school are: college readiness, workforce-ready, offering A-rated schools, Increase of property value, student options for career choices
• These design opportunities will give students that are more intended in math and technology areas to focus more on those areas rather than liberal arts.
• They will be ready for the 21st Century.
• This school is a distraction from the real issues – the lack of consistent leadership at FCS and the low academic achievement.
• Trained teachers with STEM backgrounds are imperative. Partnership with National black engineers and other organizations that can expand on or enhance academic goals. Partnership with working professionals so students can meet and engage with professionals in the STEM careers.
• Use real-world projects.
• Will we be able to vote on this design process?
• Young students can explore that options before making a commitment.