



## High School-Middle School Educational Visioning

Saugus Public Schools  
Saugus, MA

**DRAFT**



June 2016  
Frank Locker Educational Planning



## Contents + Acknowledgements

## CONTENTS

### Ch 1 Contents + Acknowledgements

### Ch 2 Executive Summary

Introduction  
Educational Vision  
Facility Concepts

### Ch 3 Educational Vision

Introduction  
Vision Components  
Guiding Principles  
Key Words for Education  
School Transformation + Development Map  
Learning Modalities  
Innovative Educational Deliveries  
School Structure

### Ch 4 Facility Concepts

Introduction  
Key Words for Facilities  
Places for Learning  
Future Furniture  
Overall HS-MS Relationship Diagram

### Ch 5 Appendices

5.1 Workshop Notes Day 1  
5.2 Workshop Notes Day 2  
5.3 21<sup>st</sup> Century Schools Presentation  
5.4 Places for Learning Presentation  
5.5 Future Furniture Presentation  
5.6 School Transformation + Development Map  
5.7 School Transformation + Development Map Results



## ACKNOWLEDGEMENTS

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## Executive Summary

## INTRODUCTION

This Educational Vision reflects the work of a Visioning Team; approximately 30 teachers, administrators, a parent/community representative, school committee members, municipal representatives, and the project architects. Created in two days of intense facilitated workshops, it is intended to guide the long-term development of both education and facilities for the future co-located high school and middle school.

## EDUCATIONAL VISION

### Guiding Principles

The *Guiding Principles* presented here were created to express the values, beliefs, and concepts developed by the Visioning Team which examined educational trends, best practices, and issues affecting the delivery of 21<sup>st</sup> century education. These *Guiding Principles* present the essence of that inquiry. They are not policy but they address the overarching themes identified by participants. They may serve as a foundation for the future high school and middle school. As such, they are intended to form the basis of future educational delivery and facilities planning. Staff professional development is crucial to the successful implementation of the educational concepts outlined here.

The *Guiding Principles* are:

### Overarching Principles

- This future-oriented Educational Vision incorporates a number of innovative 21<sup>st</sup> century educational practices already in operation in classrooms in Saugus Public Schools. Extend those practices
- Create a common understanding of this Educational Vision among administrators, faculty, parents, and students to continue shifting the educational model from one that is fairly traditional to one that is more transformed
- Prepare students for success in the 21st century, an emerging world of global competition, uncertain employment prospects, infinite access to information, and rapid change in technology
- Teach 21st century skills at the same time as traditional content



- Build relationships with students, families, and communities through school structure and programs
- Aspire beyond the Common Core and beyond the Massachusetts Department of Elementary and Secondary Education guidelines to do what is best for student learning, and to instill a life-long sense of wonder and purpose. Create independent, life-long learners
- Establish a program of staff Professional Development to support the educational deliveries outlined here

The full Guiding Principles are expressed in full in Ch 3, Educational Vision.

## Learning Modalities

The Visioning Team members identified these as the most effective ways for students to learn:

- Project-Based Learning
- Small Group Work/Student Collaboration
- Blended Learning/Flipped Classrooms
- Seminar Instruction

All Learning Modalities preferences are expressed in full in Appendix Ch 5.1.

## Internal School Organization

Visioning Team members reflected on model school organizational structures, and determined these to be the most appropriate structures for a co-located high school-middle school.

### MIDDLE SCHOOL

#### Most appropriate:

- Themed schools within the school (thematic multi-grade interdisciplinary SLCs)
- Teachers synchronously teaming, sharing students in real time

### HIGH SCHOOL

#### Most appropriate:

- Freshman Small Learning Community, followed by themed schools within the school (thematic multi-grade interdisciplinary SLCs)
- Freshman Small Learning Community (SLC), followed by Departmental Grades 10-12
- Interdisciplinary SLCs (Teachers “teaming,” sharing students but separately teaching curriculum specialties.

These most favored organizational structures call for the role of teachers to be significantly changed. Continued dialogues among educators need to start district-wide as soon as possible, extending to parents and students, to explore, share, and deploy these concepts.

See Educational Vision Ch 3 and Appendix 5.2 for full details, including least appropriate models.

## FACILITY CONCEPTS

### Places for Learning

The Visioning Team reviewed fifteen exemplar schools from the USA, the United Kingdom, and Australia. Working in Table Teams they ranked the schools for appropriateness for the future teaching and learning at a co-located high school-middle school.

Most of the schools cited as most appropriate shared these essential characteristics:

- Learning spaces arranged as Small Learning Communities
- Classrooms are components of “suites of spaces,” supported by other spaces immediately adjacent
- Circulation to be used for learning
- Classrooms are to be flexible, interconnected, and supported by auxiliary spaces including Collaboration/Breakout/Commons Spaces
- Interdisciplinary possibilities
- Presentation areas immediately adjacent to Classrooms
- Variety of furnishings, offering students and teachers more choices in supporting learning



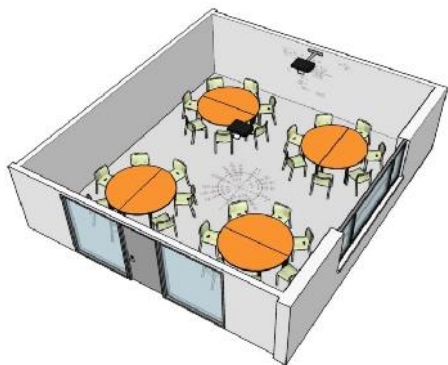


- Possibility of student groups working in multiple places under the guidance of the teacher
- Teacher Planning Centers to support teacher collaboration and sense of community

For a full description of the most appropriate and least appropriate exemplars, with illustrations, see Ch 4 Facility Concepts.

## Future Furniture

Visioning participants identified the most effective and appropriate furniture for the proposed high school-middle school. Here is a visual sampling of their most preferred selections.



See Ch 5.3 and Appendix Ch 5.2 for all selections, with scoring.

## Overall School Facility Relationship Diagram

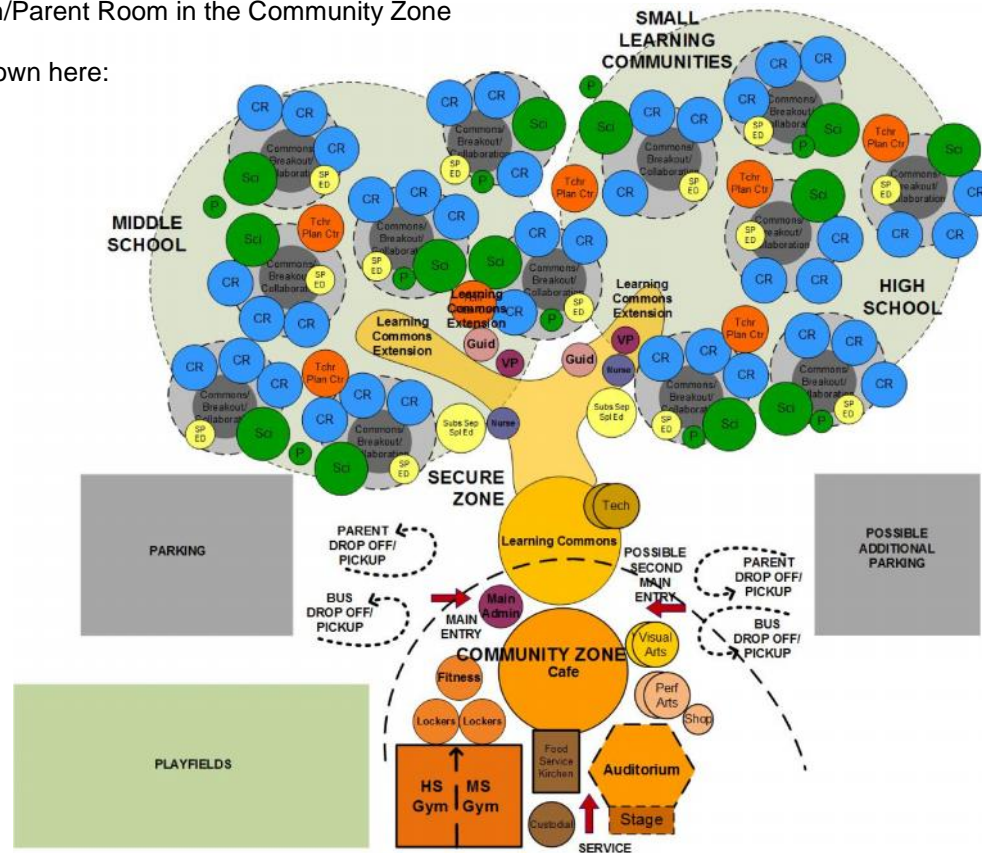
Workshop participants conceived a high school-middle school overall planning diagram. The concept featured the following essential characteristics:

- One main entry
- Secure zone for learning spaces
- Community zone with functions commonly used by the community:
  - Gyms and Fitness
  - Auditorium
  - Cafeterias
- Overall building zones based on grade levels
  - Secure zone has two possible organizations:
    - ✓ Grade 6-8 middle school and Grade 9-12 high school as shown here
    - ✓ Grades grouped as proposed on day I by Table Team 1:
      - Grades 6-7
      - Grades 8-9
      - Grades 10-11-12
- Within each grade grouping:
  - Small Learning Communities (SLCs) for core learning spaces:
    - ✓ Collaboration zone at the heart of each
    - ✓ Teacher Planning Center
    - ✓ Satellite Learning Commons
    - ✓ Special Education spaces
    - ✓ Toilets for students and for teachers
    - ✓ Substantially separate Special Education spaces
- Teachers do not own classrooms
- Central Learning Commons as well as satellites
  - The heart of academic spaces
- Middle school and high school Cafeterias served by a single Food Service Kitchen
  - Cafeterias at the center of Community Zone could function as Food Courts/Lobbies
- Principals at the main entry
- Guidance and assistant principals close to learning spaces and central Learning Commons



- Specials/electives between the Auditorium and the SLCs:
  - Tech Labs
  - Maker Spaces
  - Visual Arts
  - Performing Arts
  - Family/Consumer Science
- Community Room/Parent Room in the Community Zone

The overall diagram is shown here:



**SAUGUS HIGH SCHOOL - MIDDLE SCHOOL  
IDEAL RELATIONSHIP DIAGRAM**  
Not all spaces shown  
Number of Classrooms not determined

A variation was developed with a separate Main Lobby and a Community Health Center. See Ch 3.

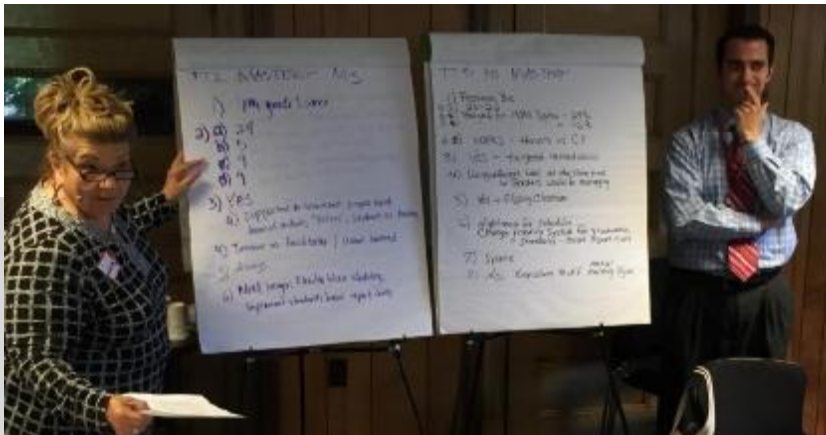




## INTRODUCTION

This Educational Vision reflects the work of a Visioning Team; approximately 35 teachers, administrators, a parent/community representative, school committee members, municipal representatives, and the project architects. Created in two days of intense facilitated workshops, it is intended to guide the long-term development of both education and facilities for a future co-located high school and middle school.

Much of the work was conducted by Table Teams, small groupings of six participants each. They brainstormed, debated, and attempted to reach consensus on most of the defining issues. Each Table Team had representatives of the different constituency groups intermixed to the greatest extent possible.



## Educational Vision

## VISION COMPONENTS

The Educational Vision for Saugus Public Schools' future schools is described here through several components:

- **Guiding Principles** establish broad parameters for educational delivery, school structure, and facilities
- **School Transformation + Development Map** (ST+DM © 2016 Frank Locker Inc) relates educational delivery and facilities to national practices, both today and projected into the future
- **Learning Modalities** identifies the most effective and appropriate ways for teachers to reach students with curriculum delivery
- **School Structure: Internal Organization** defines preferred approaches to the overall relationships of people and programs

## GUIDING PRINCIPLES

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overarching themes identified by participants. They may serve as a foundation for the future high school and middle school. As such, they are intended to form the basis of future educational delivery and facilities planning. Staff professional development is crucial to the successful implementation of the educational concepts outlined here.

The *Guiding Principles* are:

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- This future-oriented Educational Vision incorporates a number of innovative 21<sup>st</sup> century educational practices already in operation in classrooms in Saugus Public Schools. Extend those practices
- Create a common understanding of this Educational Vision among administrators, faculty, parents, and students to continue shifting the educational model from one that is fairly traditional to one that is more transformed
- Prepare students for success in the 21st century, an emerging world of global competition, uncertain employment prospects, infinite access to information, and rapid change in technology
- Teach 21st century skills at the same time as traditional content
- Build relationships with students, families, and communities through school structure and programs
- Aspire beyond the Common Core and beyond the Massachusetts Department of Elementary and Secondary Education guidelines to do what is best for student learning, and to instill a life-long sense of wonder and purpose. Create independent, life-long learners
- Establish a program of staff Professional Development to support the educational deliveries outlined here

## Educational Delivery

Educational Delivery addresses overarching themes required to provide a 21st century high-performing educational experience for all Saugus middle and high school students.

### INSTRUCTIONAL MODELS

- Employ project-based learning on a regular basis
- Group students in small learning teams to foster communication, collaboration, and improved social skills, and foster differentiated instruction

- Organize teachers in teaching teams
- Create a school and community culture that values flexibility for change
- Position students to learn 21<sup>st</sup> century skills, especially the “four C’s”, collaboration, communication, creativity, and critical thinking, while simultaneously meeting standard curriculum goals
- Integrate the curriculum by interrelating traditionally separate content areas
- Pilot innovative deliveries such as blended learning/flipped classroom for planned future large scale implementation
- Recognize students’ Multiple Intelligences in creating student centered differentiated learning experiences

### TECHNOLOGY INTEGRATION

Our world is dependent on technology implementation in all aspects of life. Students must be provided with the technological skills and knowledge which will enable them to function successfully in a global context. Technology should include:

- Recognize computer technology can be more effective than a teacher in recognizing individual students’ learning patterns and style preferences; utilize computers as part of a strategic initiative to personalize learning
- Wireless capability in all spaces in future school buildings
- Deploy mobile devices in lieu of desktop devices
- Create places and learning goals for students to learn using new technology, including documentation of oral presentations, and the production of videos, story boards, and apps

Technology must not be viewed as a curriculum add-on, but, rather as an effective tool to be utilized in meaningful instruction that is relevant and rigorous.

## Educational Structure

Educational Structure establishes the organizational patterns necessary to group students and teachers in the most effective ways.

### ORGANIZATION

- Co-locate the middle school and the high school populations in a single building to improve educational opportunities and increase operational efficiencies





- Explore thematic learning in both middle and high school years, in which the curriculum would be wrapped around interest areas such as arts or technology, thus offering student choice aligned with teacher passions
- Position educators to better know their students through the size and strategic placement of learning spaces

### RELATIONSHIPS

- Organize schools as Small Learning Communities to support formation of relationships
- Support opportunities for synchronous teacher teaming in the middle years through common planning time, class scheduling and Professional Development
- Foster student collaboration to build communication skills and the ability to work with others

### CURRICULUM

- Build 21<sup>st</sup> century skills while meeting traditional curriculum goals
- Create regular opportunities for students to improve their oral communication skills

### SCHEDULE

- Create common planning time for teachers
- Institute strategic scheduling changes to empower the concepts outlined in this Vision. The school schedules must provide for flexibility and collaboration

## Facility Implications

- Co-locate the middle school and high school populations in a single building with appropriate separations of the student populations
- Ease transition into high school with a Freshman Academy, a place for most core Classrooms used by Freshmen
- Create 21<sup>st</sup> century learning spaces in any new or renovated school facility
- Design facilities to be flexible, able to support multiple learning modalities, teaching styles, and program change over time
- Develop Small Learning Communities learning spaces arranged in clusters

- Select furniture that supports collaboration, different learning modalities, and is substantiated by brain research
- Create Teacher Planning Centers to foster collaboration, interdisciplinary teaching, and greater knowing of students by teachers
- Create spaces that support more “hands-on” learning
- Create building plans that offer security and safety despite constant visitors, many of whom will be active participants in student learning

## SCHOOL TRANSFORMATION + DEVELOPMENT MAP

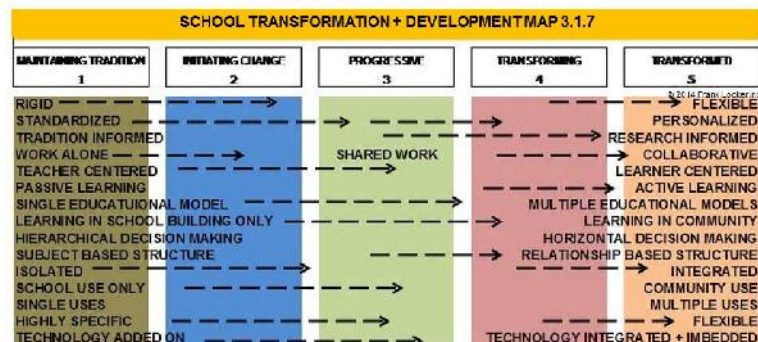
Workshop participants, working in three-person Micro Teams, used the School Transformation + Development Map to evaluate district elementary schools' current educational delivery and facilities, and to project the desired future for both.

The ST+DM expresses the evolutionary shift in education in great detail, chronicling educational practices and facility design. Schools today are in different points of evolution, and many schools expect to be in different points of evolution in the long-term future. The ST+DM characterizes schools and facilities on a 1 through 5 basis, with 1 as the most traditional category, and 5 as the most transformed.





## SCHOOL TRANSFORMATION + DEVELOPMENT MAP



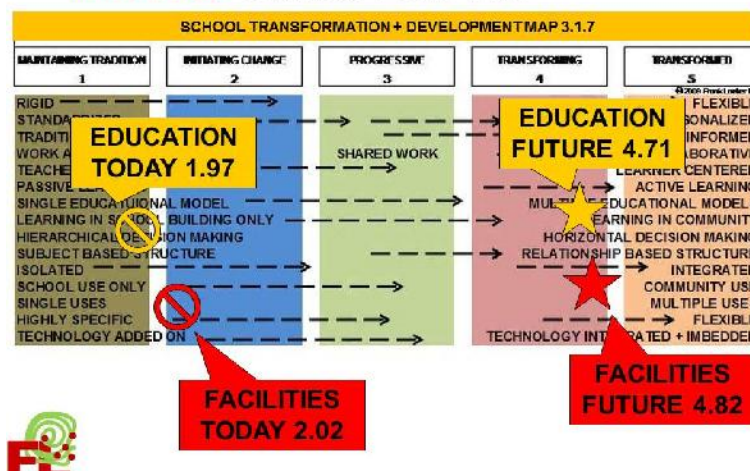
Workshop participants worked in Micro Teams to review the multiple educational practices and facilities concepts in the School Transformation + Development Map. They scored the high school and the middle school in the following categories:

- Educational Delivery Today
- Facilities Today
- Future Educational Delivery
- Future Facilities

This average score gives a general understanding of current and desired future practices and facilities. Appendix Ch 5.7 contains the results articulated by the Micro Teams.

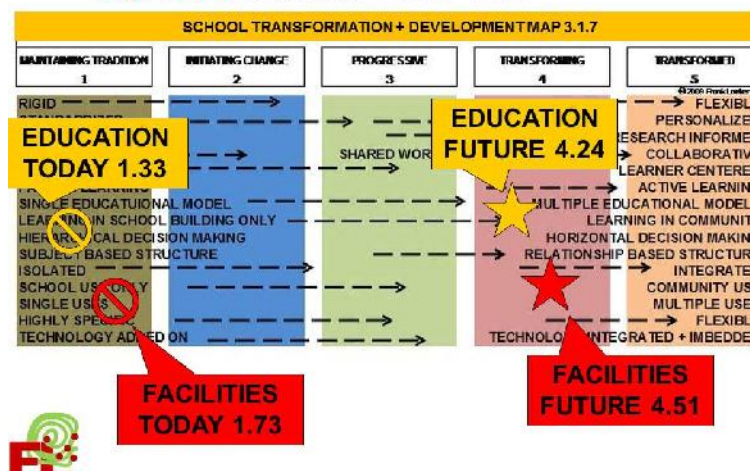
The middle school score of the Micro Teams assessing it was:

## SCHOOL TRANSFORMATION + Middle school DEVELOPMENT MAP



The average scores for the high school were:

## SCHOOL TRANSFORMATION + High school DEVELOPMENT MAP





The overall scoring of all Micro Teams was relatively close for Education and Facilities, both Now and the Future, indicating a high degree of consensus among workshop participants. Those focusing on the middle years did, however, desire a slightly more transformed future than those focusing on the high school.

The most important lessons from the ST+DM for the immediate future come from the difference between today's situation and the desired future. For both the middle school and the high school, the Visioning Team desires significant changes for education, almost three columns out of five. Desired facilities changes are as great, almost three columns.

For education this means that a program of staff professional development needs to be implemented, starting soon. For facilities, it means that facilities will not look like traditional school. In both cases dialogue with the community needs to be engaged in order to share and receive comment and guidance on the exciting concepts proposed for the future schools.

## LEARNING MODALITIES

The Visioning Team members considered twenty learning modalities, ranging from traditional lecturing and direct teaching to independent study, and ranked them in order of appropriateness.

The most commonly cited most effective modalities, in order of importance, are:

- Project-Based Learning (9 citations)
- Small Group Work/Student Collaboration (5 citations)
- Blended Learning/Flipped Classrooms (5 citations)
- Seminar Instruction (4 citations)

The most commonly cited as least effective modalities were:

- Lecture (8 citations)
- Direct Teaching (3 citations)

The full record of Learning Modalities preferences, with ranking scores, is in Appendix Ch 5.1.

## SCHOOL STRUCTURE: INTERNAL ORGANIZATION

Visioning Team members reflected on model school organizational structures, and determined these to be the most and least appropriate structures for the future high school and middle school:

### MIDDLE SCHOOL

#### Most appropriate:

- Themed schools within the school (thematic multi-grade interdisciplinary SLCs)
- Teachers synchronously teaming, sharing students in real time

#### Least appropriate:

- Departmental model

### HIGH SCHOOL

#### Most appropriate:

- Freshman Small Learning Community, followed by themed schools within the school (thematic multi-grade interdisciplinary SLCs)
- Freshman Small Learning Community (SLC), followed by Departmental Grades 10-12
- Interdisciplinary SLCs (Teachers “teaming,” sharing students but separately teaching curriculum specialties.

#### Least appropriate:

- Teachers synchronously teaming, sharing students in real time

These most favored organizational structures call for the role of teachers to be significantly changed. Continued dialogues among educators need to start district-wide as soon as possible, extending to parents and students, to explore, share, and deploy these concepts.

See Appendix Ch 5.1 for full details.





## Facility Concepts

## INTRODUCTION

The Visioning Team developed concepts for a future co-located high school-middle school. The concepts are defined through:

- **Places for Learning**, detailed descriptions of the learning environments
- **Middle School/High School Relationships**, outlining possibilities for sharing spaces between the middle school and the high school
- **Future Furniture**, expressing desired characteristics of the next generation of school furniture
- **Ideal Overall School Facility Relationship Diagram**, capturing essential concepts of a future elementary school organization

## PLACES FOR LEARNING

The Visioning Team reviewed fifteen exemplar schools from the USA, the United Kingdom, and Australia. Working in Table Teams they ranked the schools for appropriateness for the future teaching and learning at the future high school-middle school

### MOST APPROPRIATE

Several exemplars were highly favored, selected by  $\frac{1}{2}$  to  $\frac{3}{4}$  of the Table Teams as most appropriate. They were:

- Cristo Rey High School (cited by 3 of 4 Table Teams)
- Waverly High School (3 of 4 Table Teams)
- Ipswich Middle School (2 of 4)
- Old Town Elementary School (2 of 4)
- Bryan High School/Middle School (2 of 4)

### LEAST APPROPRIATE

- Southampton High School + Thompson Middle School (unanimous, cited by all 4 Table Teams)

These schools exemplify 20<sup>th</sup> century school planning, with:

- Isolated classrooms arranged along single-purpose corridors
- Little/no support spaces for classrooms
- Grade-based and curriculum-based planning, with no consideration for building relationships



- No sense of learning communities within the buildings

## ESSENTIAL CHARACTERISTICS

Most of the schools cited as most appropriate shared these characteristics:

- Learning spaces arranged as Small Learning Communities
- Classrooms are components of “suites of spaces,” supported by other spaces immediately adjacent
- Circulation to be used for learning
- Classrooms are to be flexible, interconnected, and supported by auxiliary spaces including Collaboration/Breakout/Commons Spaces
- Interdisciplinary possibilities
- Presentation areas immediately adjacent to Classrooms
- Variety of furnishings, offering students and teachers more choices in supporting learning
- Possibility of student groups working in multiple places under the guidance of the teacher
- Teacher Planning Centers to support teacher collaboration and sense of community

## Most Appropriate Planning Concepts

Here are representative photos, descriptions, and Table Team comments for the most commonly cited exemplar schools.

### CRISTO REY HIGH SCHOOL

Cited by 3 of 4 Table Teams

Featuring:

- Use of circulation as learning space
- Garage doors between Learning Studios and circulation spaces
- Cafeteria functions overlapped with circulation
- Teacher Planning Centers

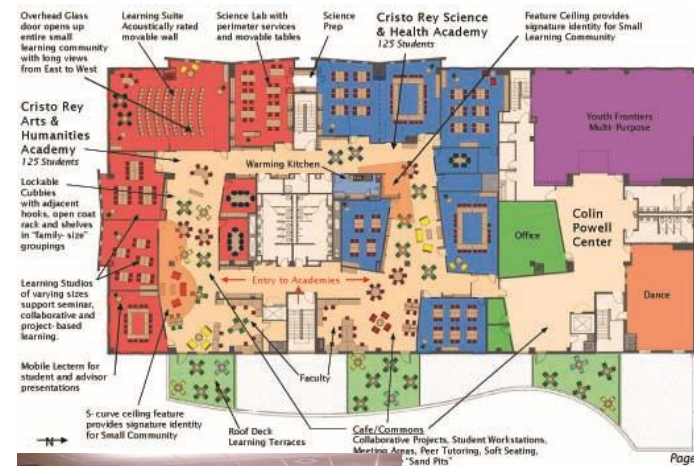


Table Team comments:

- Flexible walls
- Centralized Small Learning Communities
- Good central areas for all
- Flex walls
- Openness
- Glass
- Great flexible walls
- Group space
- Glass garage doors to extend classroom work areas



## WAVERLY HIGH SCHOOL Cited by 3 of 4 Table Teams

Featuring:

- Small Learning Communities as “go to” places
- Use of circulation as learning space
- Folding walls between Learning Studios
- “Fat L” Classrooms wrapped around Small Group Rooms
- STEM supported by combo Science/Industrial tech labs
- Teacher Planning Centers

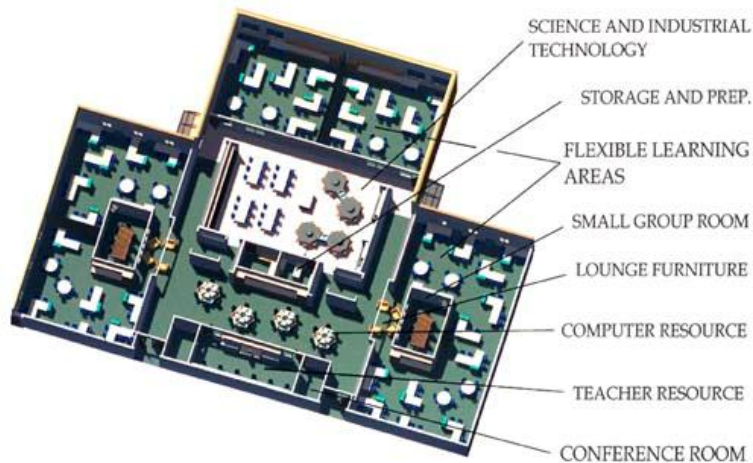


Table Team comments:

- Bryan looks like it would fit well inside the larger model of Waverly
- Collaborative shared spaces
- Flexible walls
- Centralized Small Learning Communities
- Good central areas for all
- Flexible
- Multi-use
- Collaboration
- Condensed
- Cost-effective
- “House” feel

## IPSWICH MIDDLE SCHOOL Cited by 2 of 4 Table Teams

Featuring:

- Arranged in “pods” or “clusters” with eight classrooms, a Teacher Planning Center, and a Special Education Resource Room in each
- Each pod is centered around a shared Commons/breakout space
- Classrooms are arranged in pairs
  - Math and science
  - English and social studies
- Paired Classrooms have communicating double doors between them
- Commons/breakout space designed as multi-media presentation space

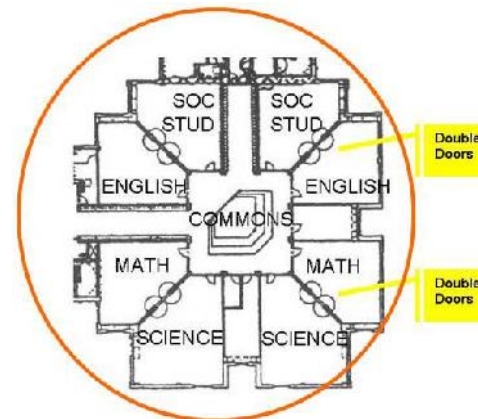


Table Team comments included:

- “House” feel
- Common usable space
- Concern over diagonal walls
- Lends itself well for collaboration
- Good use of the center presentation area



## OLD TOWN ELEMENTARY SCHOOL Cited by 2 of 4 Table Teams

Featuring:

- Classrooms arranged as a cluster around a central Commons
- The number of classrooms in a cluster intentionally does not match the number of classrooms needed for each grade level
- 6 FT wide openings between adjacent classrooms
- Commons Area has presentation area, alcoves for breakout/tutorials, mini-Library area
- Accessible through Commons are Teacher Planning Center, Student Toilets, Storage, Specialist Offices

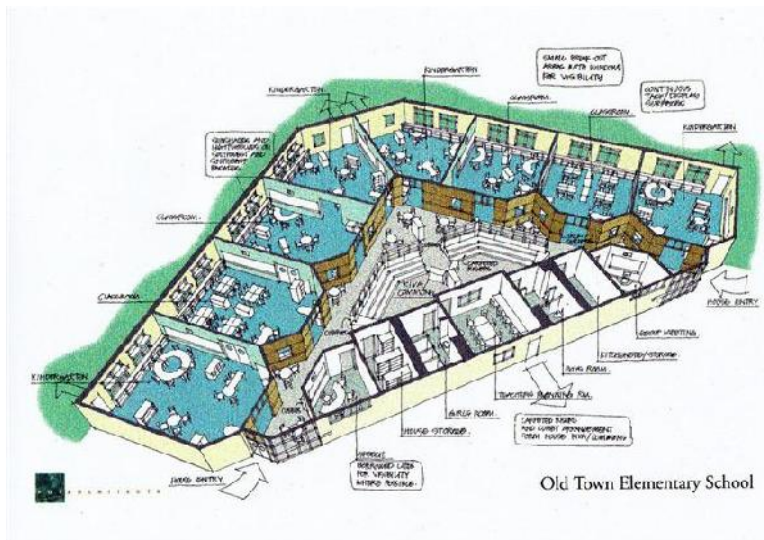


Table Team comments:

- Collaborative shared spaces
- Flexible walls
- Centralized Small Learning Communities
- Good central areas for all
- Very flexible
- Multi-use
- Common spaces

## BRYAN HIGH SCHOOL/MIDDLE SCHOOL Cited by 2 of 4 Table Teams

Featuring:

- Use of circulation as learning space
- Garage doors between Learning Studios and circulation spaces
- Folding walls between Learning Studios
- Teacher Planning Centers
- Presentation Alcoves
- Centrally located Science/STEM Lab

OPEN CONFIGURATION



E=21<sup>C</sup> STUDIO  
EDUCATION SUITE FOR THE 21<sup>st</sup> CENTURY

Table Team comments:

- Open
- Flexible
- Collaboration
- Bryan looks like it would fit well inside the larger model of Waverly
- Collaborative shared spaces
- Flexible walls
- Centralized Small Learning Communities
- Good central areas for all





## Least Appropriate Planning Concepts

### SOUTHAMPTON HIGH SCHOOL + THOMPSON MIDDLE SCHOOL

Unanimous, cited by 4 of 4 Table Teams

Featuring:

- Challenging separations between learning spaces
- Isolated classrooms
- No central focus

Table Team comments:

- Traditional
- Sprawling
- Inflexible
- Limiting
- We already have this
- Departmentalized – no sharing or collaboration

## MIDDLE SCHOOL-HIGH SCHOOL RELATIONSHIPS

The Visioning Team identified the following separations and shared use concepts critical to organizing the proposed co-located high school-middle school. Some functions have locational notes:

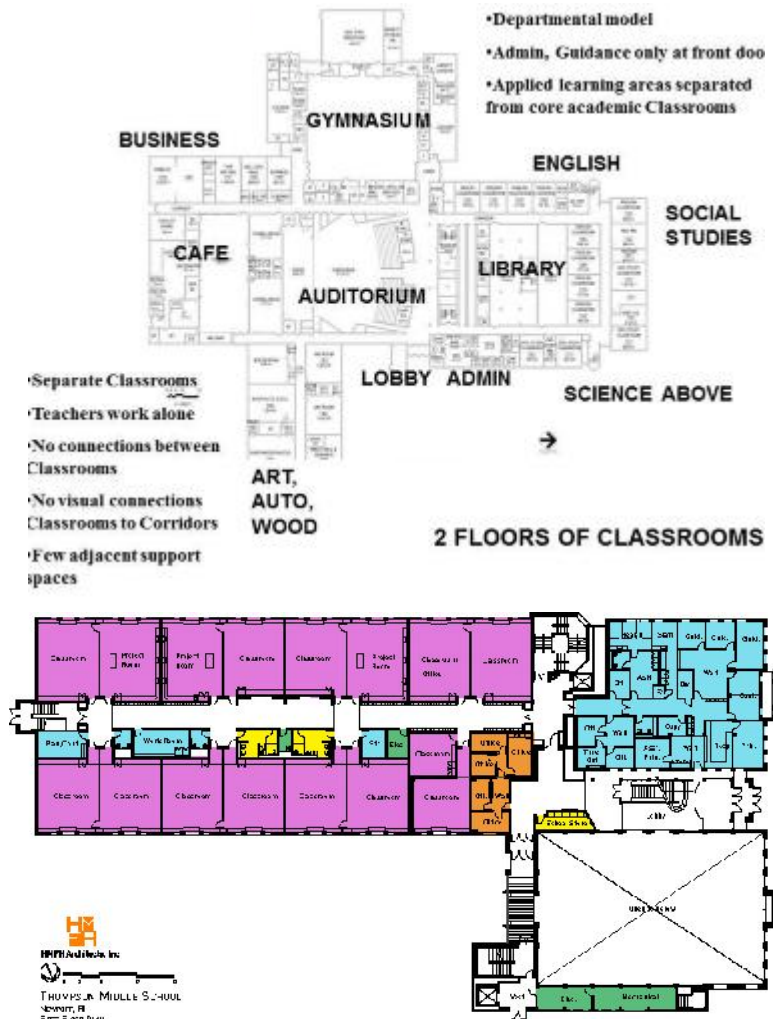
- A “C” indicates that the function should be located for easy access by the community
- Essential adjacencies are noted

### SEPARATE MIDDLE SCHOOL FUNCTIONS

- Most core learning studios
- PE/Athletic Locker Rooms
- Guidance
  - Nearby HS guidance
- Assistant Principal
  - Near guidance and kids
- Nurse
  - Adjacent to HS nurse
- Adjacent counselor
  - Near HS Adjacent counselor
- Cafeteria
  - Folding wall to allow combination with HS cafeteria
- Principal
  - Close to HS

### SHARED FUNCTIONS

- Library/Media Center/Learning Commons
  - With zoning for HS and MS within
- Phys Ed Teacher Planning Center
  - Share with core teachers or others





- Athletic trainer
- OT/PT/Speech
- BCBA – school psychologist
- Food Service Kitchen
- District Technology Office
- District Superintendent offices

#### TIME SHARED FUNCTIONS

- Black Box (C)
- Auditorium (C)
- Stagecraft Room/Shop
- Main Gym (C)
  - Varsity sports
- Small Gym (C)
  - Explore combining main Gym and Small Gym to create a Field House
- Fitness Center (C)
- Computer Labs
  - Only for large screen needs
- Creative Labs
- Program Labs such as for math or writing
- Maker Space
- STEM Lab
- Some Learning Studios (formerly called Classrooms)
- Performing arts suite
  - Exact nature of time share TBD
- Visual Arts
- Health Studios

#### SEPARATE HIGH SCHOOL FUNCTIONS

- Most core Learning Studios
- PE/Athletic Locker Rooms
- Guidance
  - Nearby MS guidance
- Assistant Principal
  - Near guidance and kids
- Nurse
  - Adjacent to MS nurse
- Adjustment Counselor
  - Near MS
- Cafeteria

- With folding wall to combine with MS Cafeteria
- Principal's Office

## FUTURE FURNITURE

The HS-MS Visioning Team participants reviewed and ranked Classroom and breakout/commons furniture options for the future. Their 10 most favored selections are shown here, in order of priority:

#### Animation Comparing Traditional Classrooms with Use of Breakout/Collaboration Spaces

9 like, 0 not like





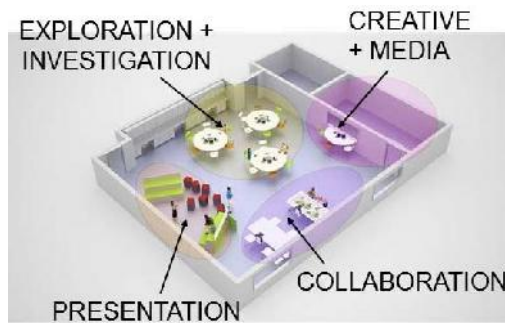
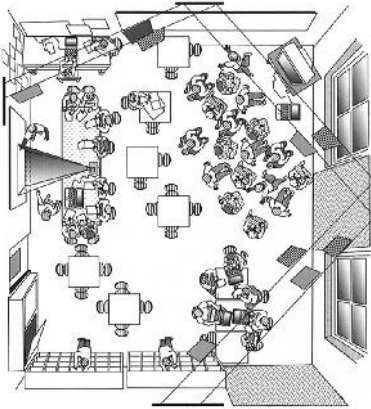
### Steelcase Node Chairs

9 like, 0 not like



### School Furniture: Student Centered Learning – Step 5

8 like, 0 not like



### D School Maker Space, Stanford University

8 like, 0 not like



### D School Maker Space, Stanford University

8 like, 0 not like





### D School Maker Space, Stanford University

8 like, 0 not like



### Electronic Furniture

8 like, 1 not like



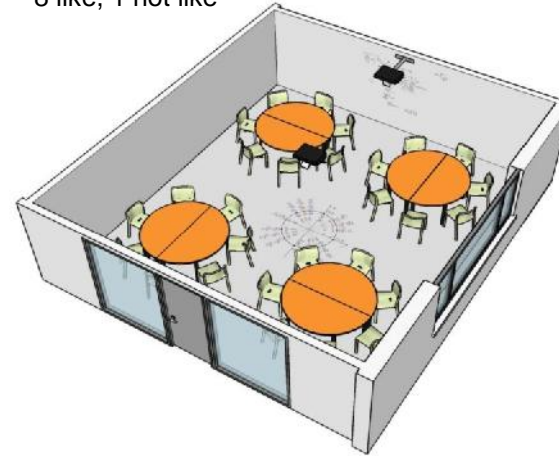
### Stand Up desks

8 like, 1 not like



### Round Tables, the Quintessential Collaboration Statement

8 like, 1 not like



### School Furniture: Student Centered Learning – Step 4

8 like, 1 not like





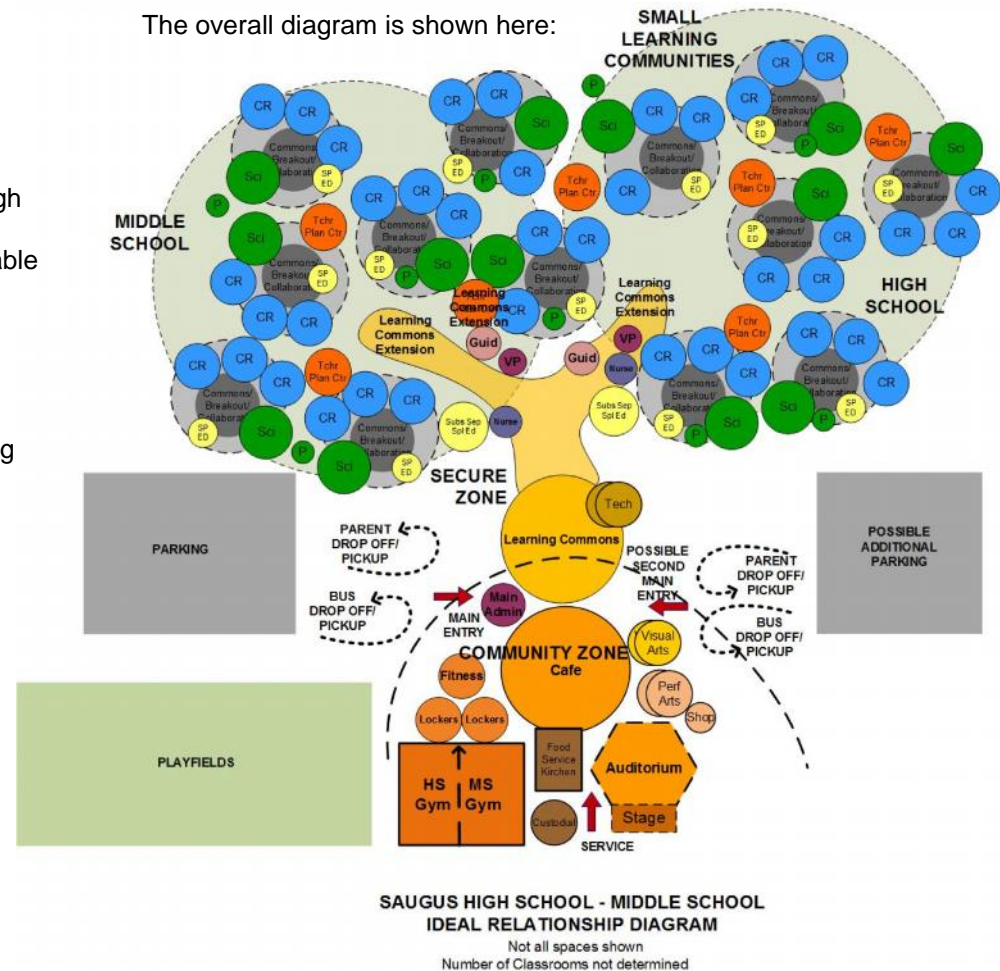
## IDEAL OVERALL SCHOOL FACILITY RELATIONSHIP DIAGRAM

Workshop participants conceived a high school-middle school overall planning diagram. The concept featured the following essential characteristics:

- One main entry
- Secure zone for learning spaces
- Community zone with functions commonly used by the community:
  - Gyms and Fitness
  - Auditorium
  - Cafeterias
- Overall building zones based on grade levels
  - Secure zone has two possible organizations:
    - ✓ Grade 6-8 middle school and Grade 9-12 high school as shown here
    - ✓ Grades grouped as proposed on day I by Table Team 1:
      - Grades 6-7
      - Grades 8-9
      - Grades 10-11-12
- Within each grade grouping:
  - Small Learning Communities (SLCs) for core learning spaces:
    - ✓ Collaboration zone at the heart of each
    - ✓ Teacher Planning Center
    - ✓ Satellite Learning Commons
    - ✓ Special Education spaces
    - ✓ Toilets for students and for teachers
    - ✓ Substantially separate Special Education spaces
- Teachers do not own classrooms
- Central Learning Commons as well as satellites
  - The heart of academic spaces
- Middle school and high school Cafeterias served by a single Food Service Kitchen
  - Cafeterias at the center of Community Zone could function as Food Courts/Lobbies
- Principals at the main entry

- Guidance and assistant principals close to learning spaces and central Learning Commons
- Specials/electives between the Auditorium and the SLCs:
  - Tech Labs
  - Maker Spaces
  - Visual Arts
  - Performing Arts
  - Family/Consumer Science
- Community Room/Parent Room in the Community Zone

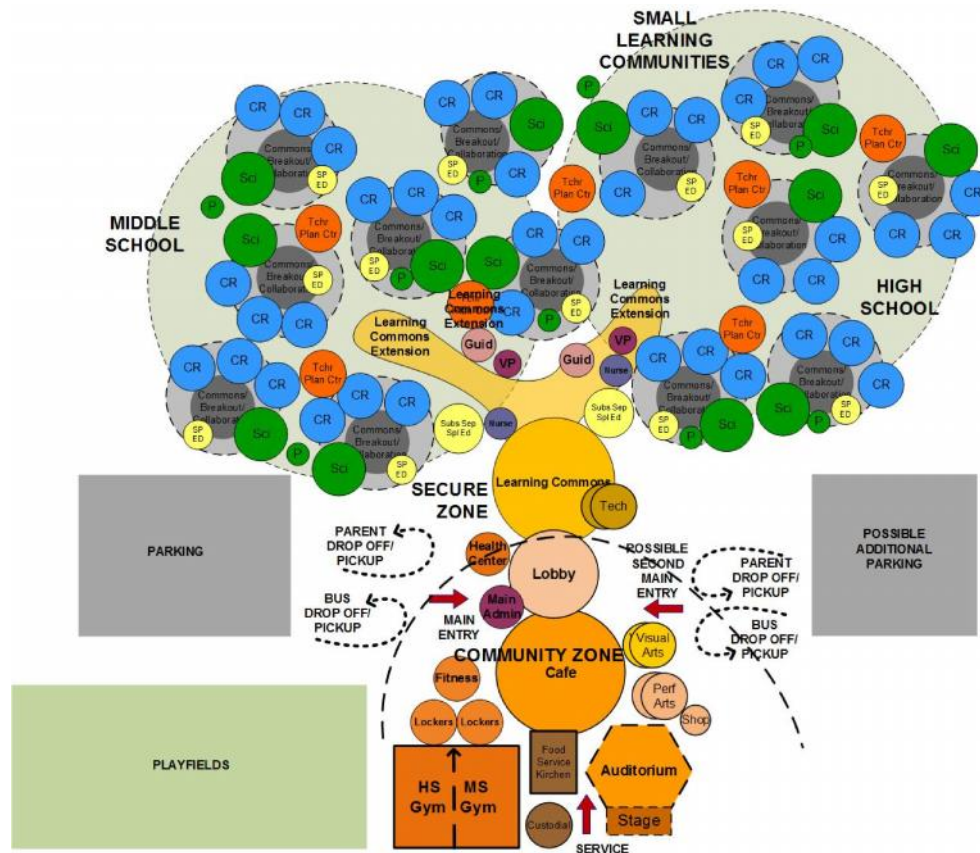
The overall diagram is shown here:



## HS-MS Ch 4 Facility Concepts **DRAFT**



Here is an alternative concept, with a defined Main Lobby and a Community Health Center:



**SAUGUS HIGH SCHOOL - MIDDLE SCHOOL  
IDEAL RELATIONSHIP DIAGRAM**  
Not all spaces shown  
Number of Classrooms not determined





## Notes Workshop Day 1

## AGENDA

The first Visioning Workshop was held on 15<sup>th</sup> June 2016. Notes of all activities follow:

- Pre-Workshop Videos
- District Visioning
- Snapshot of Belmonte Middle School + Saugus High School
- 21<sup>st</sup> Century Schools Presentation
- What Works at SHS/BMS?
- Humans Need Not Apply
- Mastery/Adaptive Learning
- Making Things to Learn
- School Structure: Internal Organization
- Learning Modalities

## PRE-WORKSHOP VIDEOS

Workshop participants had watched three videos and read one magazine article before coming together, in the spirit of blended learning. They were:

- Ken Robinson, *How Schools kill Creativity*
- James Paul Gee, *Learning with Video Games*
- Randy Nelson: *Living + Working in the Collaborative Age*
- *Humans Need Not Apply*

Here are their thoughts in response:

- Robinson on ADHD:
  - Has increased with standardized testing
  - Still on the rise in East and SE portions of the USA
  - If we change the teaching model we can lower ADHD
  - Get kids to move, manipulate
- Our schools were built centuries ago:
  - Different goals
  - Different times
- Divergent thinkers:
  - In kindergarten they are 98% of the students
  - In middle school, much lower
- Testing
  - We should only have tests as little as possible



- Video games:
  - Application establishes the goal
  - Kids are actively engaged in solving problems
- ELL student from Saudi Arabia said he learned English thru video games
- Nelson correlates with Gee:
  - Collaboration
    - ✓ In video games
    - ✓ Mind Craft
      - Every person develops skills
      - Have to collaborate
- Can video games develop well-rounded skill sets?
  - Not necessarily
  - Educators need to expand kids' skill sets
- Need to balance kids multiple-learning modalities
  - Some traditional
- Some teachers fear shift from tradition
  - Especially if they are traditional learners

## DISTRICT VISIONING

Visioning Team members who were participants in the district Visioning shared the essentials of that experience with their table mates. Their thoughts were:

### Table Team 1

#### District Visioning reflection

##### Two Most Important Issues

- Student-centered learning
- Flexible spaces (well designed)

##### Other Issues

- Project-based learning (Maker Space)
- Collaboration
- Integrated curriculum (learning)
- HS vs HS/MS
- Teacher spaces
- Different/varied furniture

### Table Team 2

#### District Visioning reflection

##### Two Most Important Issues

- Small Learning Communities
  - Project-based learning
- Open space/convertible (student-controlled space)/flexible/interconnected classroom and use of corridors, garage doors

##### Other Issues

- Integrated learning
- Technology – Maker Space (every classroom)
- Holograms
- Teacher synchronous teaming
- Grade-level Small Learning Communities
- HS model more like MS model
- Teacher collaborative space
- Breakout spaces
- More parent/community involvement
- Common space – flowing studios

### Table Team 3

#### District Visioning reflection

##### Two Most Important Issues

- Facilities do not allow for some of those changes
- Explored learning environment
  - Flexibility

##### Other Issues

- Move from more traditional to project-based learning
- Explored learning environment
  - Collaborative spaces
- We liked grouping and “theming”
  - Freshman Academy
- Independent learning experiences
- Usable space and furniture
- Usable outdoor space



#### Table Team 4

##### District Visioning reflection

- Where we are:
  - School transformation self-assessment
  - 1-3 OCC 4
  - Traditional Learning style
- Where we want to be:
  - Flexible space
  - Collaboration
  - Project-based Learning
  - Lighting (natural)

##### Whole Group Discussion

These points were made in a general discussion following:

- “Tough sells” with the community:
  - Fears of security in buildings with glass
  - Have to teach community the concept that education is changing
  - The co-located HS-MS
    - ✓ Have to show how it is a gem
  - Closing small elementary schools

## SNAPSHOT OF BELMONTE MIDDLE SCHOOL + SAUGUS HIGH SCHOOL

High school principal Brendon Sullivan and middle school principal Kerry Robbins outlined key characteristics of their schools:

- Brendon Sullivan on SHS:
  - Mostly traditional classrooms
    - ✓ +8 science labs
    - ✓ Some science labs repurposed
  - Three computer labs with staff
  - Lots of Chrome Book carts
  - Inadequate administrative offices
  - Arts Rooms with Black Box Theaters
  - Life skills programs for students 18-22 with IEPs
  - Behavior program is located in an old shop
  - Saugus public-access studio is in an old wood shop
  - We have had some upgrades

- Very little teacher common space
- Poor security controls
- Infrastructure upgrades but lots of room for improvement
- Biggest problem is we have a large sprawling building
- Has extra hardly-used spaces
- Lots of security breaches
- Current enrollment is 700 students 9-12
- Specialists include Speech
- District Guidance Director is located at SHS
- College prep HS curriculum
  - ✓ Expanded AP classes recently offering Spanish and Italian
- Strong fine arts curriculum
- Strong technology
- Good number of electives despite budget cuts
- Good childcare program
- Schedule
  - ✓ M/TH/F - 47 minute, 7 periods
  - ✓ Tue/Wed – long blocks
    - Mentor period
    - Common planning time
- Lots pf educational challenges presented by facility
- Very little common space for teachers
- PE/athletics
  - ✓ Fields sub-par
  - ✓ Some recent Gym upgrades but need lots more
  - ✓ No sprinklers
  - ✓ Fire Drill safety issues
- Auditorium
  - ✓ Light and sound equipment lacking

- Kerry Robbins on BMS:
  - Not enough lockers
  - Most office spaces not private
  - Guidance not private
  - Renovation three years ago
    - ✓ Security 80% complete
  - Sprinklers OK
  - 660 Students
    - ✓ 98/EPS
  - Three floors:





- ✓ Academic team on each
- ✓ Encore staff at each floor
- We practice a true MS philosophy
- Honors courses:
  - ✓ Two at 7<sup>th</sup> Grade
  - ✓ Three at 8<sup>th</sup> Grade
- 1 Computer Lab and Chrome Books for each team
  - ✓ Behind most schools systems
- Do not have a librarian
  - ✓ Volunteers instead
- 40 minute blocks
  - ✓ 6 periods per day
- Encore is scheduled on alternating days
- As 6-12 need to focus on district-wide social curriculum
  - ✓ Behavior
  - ✓ Will gain consistency
- 23 kids/class average
- There will be many issues if building is repurposed for elementary use

## 21<sup>st</sup> CENTURY SCHOOLS PRESENTATION

Frank Locker presented on the changing values, goals, and deliveries that characterize the most progressive thinking about schools in the United States, and worldwide, today. Key points included:

- 20<sup>th</sup> vs 21<sup>st</sup> century schools:
  - The 20th century was a century of creating efficient schools; the 21st century has been a century of looking for effectiveness in schools
  - 20th century was the century of the teacher; 21st century is the century of the learner
  - The teacher used to hold all the information; now the teacher is the guide
- Research in learning informs us of many effective educational practices
  - Some are gaining popularity
  - Others are not yet in general practice
- Learning is more effective when students apply their learning immediately

- The Multiple Intelligence Theory explains why different students learn best in different ways
- 21st Century Skills Framework offers a clear concept of skills students need for success in our rapidly changing global economy. It establishes:
  - Core, subject-based learning is not sufficient any more
  - Learning relevant 21st century survival skills is just as important, perhaps more important. These include:
    - ✓ Learning and innovation skills
    - ✓ Life and career skills
    - ✓ Information, media, and technology skills
  - Craig Jerald was cited as researching the most important traits that business and industry really want – professionalism/work ethic
  - Learning should be interdisciplinary, bridging the gaps between subject areas
  - Learning should be infused with 21st century themes. These include:
    - ✓ Global awareness
    - ✓ Financial, economic, business and entrepreneurial literacy
    - ✓ Civic literacy
    - ✓ Health literacy
  - Learning is a social activity. Students learn better when they are in strong relationships with teachers and peers
  - The Relevance and Rigor Framework of the International Center for Leadership in Education correlated Bloom's Taxonomy with application, offering a concise understanding of effective learning
  - Google's Futurist has identified future new job titles
    - ✓ University Dismantler
    - ✓ Wireless Electrician
    - ✓ Urban Agriculturalist
  - Teachers' work is supported through strong relationships with other professionals
  - Schools are looking for more community connections to improve student learning
  - Flexible furniture is needed to bring the student the support to learn in a variety of modalities





## Individual Responses

Visioning Team members scored the importance of the different issues outlined while Frank was presenting. They were asked "How important are these issues to teaching and learning at our future high school and middle school?"

A compilation of their scores is shown below. Individual comments follow on the next page:

ISSUE	VERY IMPORTANT	IMPORTANT	DON'T KNOW	MAYBE NOT	NOT IMPORTANT	SCARY TO ME
1 Learning Pyramid	6	8	1	3		
2 Gardner: Multiple Intelligences	5	12		1		1
3 Integrate arts in core learning	5	10	3			
4 Environmental Sciences/Sustainable Living/STEM/STEAM/Engineering	18	7				
5 Relationships: Dunbar's Law, "Magic of 150"	5	8	5			
6 Computers for Learning: Adaptive Learning, Blended Learning, Computer Games Learning	8	9	1			1
7 Revised Bloom's Taxonomy	2	11	4	1		
8 Daggett: Relevance + Rigor Framework	5	8	4			
9 21 <sup>st</sup> Century Skills	11	7				
10 Jerald's Research on 21 <sup>st</sup> Cent Education	7	7	4		2	
11 Project Based Learning, Africa, Café Paresien	12	6				
12 Deeper Learning	7	7	2		1	

ISSUE	VERY IMPORTANT	IMPORTANT	DON'T KNOW	MAYBE NOT	NOT IMPORTANT	SCARY TO ME
13 Making Things to Learn	8	10				
14 Small Learning Communities	16	2				
15 Flexible, Varied, Brain-Based Furniture	13	5				
16 New Technology Close by	9	7	1			1
17 21 <sup>st</sup> Century Learning Spaces	15	3				
18 Teacher Planning Centers	12	5	1			
19 End of the Library As We Know It Today	5	10	3			
20 End of the Cafeteria as We Know It Today	6	11		1		
21 Flexibility for Change	16	2				
22 Collaboration/Breakout/Commons	15	3				1
23 Teacher Teaming/Collaboration	9	7	2			1
24 End of the Classroom as We Know It Today	11	5	2			
25 Co-Located Middle Schools + High Schools	8	5	2			





## Individual Comments

Comments from individual Visioning Team members in response to the presentation issues follow:

### ISSUE

#### 1 Learning Pyramid

- Too not applicable
- Engagement is most important
- Outdated – doesn't properly articulate different learning styles
- Minimize reading? Disagree with that idea
- Varies by student, case to case

#### 2 Gardner: Multiple Intelligence

- Depends how we use it

#### 3 Integrate Arts in Core Learning

- Hands-on etc, good
- Only a good idea if done very well and individually

#### 4 Environmental Sciences/Sustainable Living/STEM/STEAM/Engineering

- Do kids want it?

#### 5 Relationships: Dunbar's Law, "Magic of 150"

- Relationships are crucial

#### 6 Computers for Learning: Adaptive Learning, Blended Learning, Computer Games Learning

- I'm skeptical but open-minded. I think technology is overrated
- BALANCE NEEDED – person to –person interaction still crucial
- Feasible

#### 7 Revised Bloom's Taxonomy

#### 8 Daggett: Relevance + Rigor Framework

- Makes sense
- Moving towards project-based learning

#### 9 21<sup>st</sup> Century Skills

#### 10 Jerald's Research on 21<sup>st</sup> Century Education

- Misrepresents skills developed in "core" subjects – except English
- Need context

#### 11 Project-Based Learning, Africa, Café Paresien

#### 12 Deeper Learning

#### 13 Making Things to Learn

- Hands-on vital, wind example
- Integrates cognition

#### 14 Small Learning Communities

- Program of spaces, configurations
- Helps build relationships

#### 15 Flexible, Varied, Brain-Based Furniture

- Experiment with various furniture styles good idea
- I'd like to see research, data about this
- Students feel a sense of comfort in class

#### 16 New Technology Close by

- Vital for access to technology for learning
- I'm skeptical but open-minded. Technology is overrated
- Centers in Learning Commons Room real, UK - horizontal smartboards
- Four-year old CPU's now considered ancient

#### 17 21<sup>st</sup> Century Learning Spaces

- Should be basis for layout design in new facility
- This matters but not as much as what the humans do

#### 18 Teacher Planning Centers

- Incorporate this concept
- This matters but not as much as what the humans do
- South Paris, ME

#### 19 End of the Library as We Know It Today

- Update it but not sure of the one shown

#### 20 End of the Cafeteria as We Know It Today





- Again updated but not sure

## 21 Flexibility for Change

- Very important aspect
- New Tech HS - Calif

## 22 Collaboration/Breakout/Commons

- Really good idea, but are these spaces actually used?

## 23 Teacher Teaming/Collaboration

- It depends who the teachers are. Teachers who aren't on the same page shouldn't be forced to team together

## 24 End of the Classroom as We Know It Today

- We need to prepare students for college which hasn't moved forward → balance

## 25 Co-Located Middle Schools + High Schools

- Separate Cafeterias/Gyms
- Careful thought should go into this!
- Worry about common space conflict

## 26 Other

- Hs-MS models for us:
  - Scituate, MS
  - Central Falls, RI
  - North Olmstead, OH

## WHAT WORKS AT SHS/BMS?

The whole group brainstormed on what currently works at the secondary schools.

Here are the Visioning Team's thoughts:

### Works

- High School
  - Partnership with Ballard

- ✓ PK – Early Child Lab
- ✓ Practical hands-on experience for

## ▪ Middle School

- Team time in schedule
  - ✓ Teacher collaboration
- Pilot programs
  - ✓ Nest steps for success
    - SPLED
    - With Saugus Recreation Department
    - At risk social
- ✓ Instructional leadership teams
  - Feedback facilitators

## ▪ High School

- Fine arts great
  - ✓ Despite facilities
- Good Library despite facilities
  - ✓ Research

## HUMANS NEED NOT APPLY

This video outlined the rapid and pervasive changes in the world-wide workplace, with computer robots performing tasks we conventionally believe to be the exclusive domain of humans. Virtually no field of work has been unaffected by “bots,” including law and art. It demonstrates that computers are able to perform many tasks better than humans, and suggests that our concepts of fulfillment in work and full unemployment may be short lived.

Workshop participants were asked “What from this video applies to your future school(s)?”

Their responses were:

- We should help kids define the kind of world they want
- We have no concept of what this will be like
- Sweden is experimenting with guaranteed income
- Bots answer “what”, not “why”





## MASTERY/ADAPTIVE LEARNING

This was the challenge:

### MASTERY/ADAPTIVE LEARNING

**Identify a focus/familiarity: Middle High**

**Table Team discussion and report out**

### DEFINITIONS

Standard learning: seat time is constant; amount of learning varies by student.

Mastery learning: seat time is variable; learning is mastered.

Adaptive learning: technology is used as a tool to support Mastery Learning.

### CURRENT PRACTICES

1. Identify a classroom, by grade level and subject at one of your schools.
2. Answer these questions:
  - a. How many students in the class?
  - b. How many students are learning below grade level?
  - c. How many are above?
  - d. How many students don't want others to know when they don't understand the learning material?

### NEXT PRACTICES

3. Could mastery learning improve learning? YES or NO
  - a. If "yes", how?
4. What would classroom activities look like? Describe how a teacher could guide/manage teaching like this.

5. Could learning be enhanced by use of computers with adaptive learning programs?
6. What might mastery learning mean for scheduling? For graduation concepts?
7. What might mastery learning mean for facilities?
8. Do you think Saugus Public Schools should support mastery-based, adaptive learning in all classrooms on a regular basis? YES or NO
  - a. Why?
  - b. Why not?

Two table teams addressed this challenge. Responses were:

#### TABLE TEAM 2

#### Mastery (Adaptive) Learning

#### Middle school focus

##### 1 Classroom:

- 7<sup>th</sup> Grade science

##### 2 Questions:

- **A Students in the class:**  
✓ 24
- **B Students below grade level:**  
✓ 5
- **C Students above:**  
✓ 9
- **D Don't want others to know:**  
✓ 9

##### 3 Mastery improves learning?

- Yes  
✓ A supporting environment, project-based, teams of students, "stations", students as teachers

##### 4 Classroom activities?

- Teacher as facilitator/student-centered

##### 5 Computers?

- Always

##### 6 Schedule?

- Need longer, flexible block scheduling, implementing standards-based report cards





## 7 Facilities?

- o Larger, open, flexible for collaboration, varied sizes, teaching-based “stations”- not assigned classrooms, all have the same technology, operable walls, classroom walls with character building materials/social learning/student work

## 8 Support?

- o Yes – but a steady transition

### TABLE TEAM 3

#### Mastery (Adaptive) Learning

#### Elementary school focus

##### 1 Classroom:

- o Freshman biology

##### 2 Questions:

- o **A Students in the class:**  
✓ 20-22
- o **B Students below grade level:**  
✓ Based on MCAS data – 29%
- o **C Students above:**  
✓ Based on MCAS data – 16%
- o **D Don't want others to know:**  
✓ Varies – honors vs CP

##### 3 Mastery improves learning?

- o Yes – targeted remediation/enrichment

##### 4 Classroom activities?

- o Doing different labs at the same time
- o Teachers would be managing

##### 5 Computers?

- o Yes – flipping classrooms

##### 6 Schedule?

- o Nightmare for scheduling, changing grading system for graduation, standards-based report card

##### 7 Facilities?

- o Space

##### 8 Support?

- o No, exposure to different teaching/learning styles

## MAKING THINGS TO LEARN

The Visioning Team responded to this challenge:

### MAKING THINGS TO LEARN

**Identify a focus/familiarity: Middle High**

**Table Team discussion and report out**

1. Do you believe that making things can contribute to a student's cognitive growth?
  - a. How and why?
  - b. Does this apply to our highest achieving students?
2. Do you believe that “making things” can contribute to a student's sense of self-worth?
  - a. How and why?
  - b. Does this apply to our highest achieving students?
3. Develop a scenario for making things to learn
4. How low on the grade spectrum could “making things to learn” be effective?
5. Do you think Saugus Public Schools should support “making things to learn” on a regular basis **in core classes**?
  - a. If not all, which ones?
  - b. If not regularly, when?
6. What might this mean for facilities?

Two Table Teams explored this issue. Their responses were:

### TABLE TEAM 1

#### Making Things

##### 1 Contribute to cognitive growth?

###### A How and why?

- ✓ Yes – creating makes students more engaged

###### B Apply to highest achieving?





- ✓ Yes – creating/making/synthesizing is an important part of every student's learning
- 2 Contribute to self-worth?**
  - A How and why?**
    - ✓ Yes – ownership and self-confidence/pride
  - B Apply to highest achieving?**
    - ✓ Yes
- 3 Scenario:**
  - Making a robot – collaboration between
    - ✓ Auto – CAD
    - ✓ Math – geometry
    - ✓ Physics – distance
    - ✓ 3D printer – collaboration with experts
- 4 How low on grade spectrum?**
  - K-12 – never too early to start making things
- 5 Support in core?**
  - Yes
- 6 What might this mean for facilities?**
  - New HS with flexibility

**TABLE TEAM 4**  
**Making Things**  
**Middle school focus**

- 1 Contribute to cognitive growth?**
  - A How and why?**
    - ✓ Yes, because it makes things valuable, tangible
  - B Apply to highest achieving?**
    - ✓ Yes, should be an option for them
- 2 Contribute to self-worth?**
  - A How and why?**
    - ✓ Yes, pride in their work, opportunity for oral expression
  - B Apply to highest achieving?**
    - ✓ Yes, again should be optional
    - ✓ Encourages both teamwork and collaboration
- 3 Scenario:**
  - Scenario = paper gliders
    - ✓ Measurement/graphing/looking at differences (nose, tail, wings/body length)
- 4 How low on grade spectrum?**
  - All levels depending on learning styles

**5 Support in core?**

- Yes – on a regular basis

**6 What might this mean for facilities?**

- Need multiple spaces for walking, for storage, tools, materials – good lighting

\*Opportunity for teachers to collaborate cross-curriculum

## SCHOOL STRUCTURE: INTERNAL ORGANIZATION

This was the challenge:

### SCHOOL STRUCTURE: INTERNAL ORGANIZATION

Identify a focus/familiarity: **Middle High**

Table Team discussion and report out

### ORGANIZATIONAL CONCEPTS

CREATE THE MOST APPROPRIATE CONCEPT FOR THE FUTURE FROM AN EDUCATIONAL POINT OF VIEW

1. Rank the following, from most appropriate(=1) to least appropriate (=7)
2. Analyze your most appropriate one:
  - a. Elaborate on the structure to give it more definition
  - b. Combine possibilities if desired
  - c. Identify the Pros and Cons
  - d. What would you do to mitigate the Cons?





## MIDDLE SCHOOL ORGANIZATIONAL MODELS

- Departmental model
- Grade Level SLCs (Teachers “teaming,” sharing students but separately teaching curriculum specialties)
- Grade Level SLCs, as choice B but add teachers looping
- Multi-grade SLCs
- Themed school(s) within the school (thematic multi-grade interdisciplinary SLCs)
- Teachers synchronously teaming, sharing students in real time
- Other

## HIGH SCHOOL ORGANIZATIONAL MODELS

- Departmental model Grades 9-12
- Freshman SLC, followed by Departmental Grades 10-12
- Interdisciplinary SLCs (Teachers “teaming,” sharing students but separately teaching curriculum specialties)
- Freshman SLC, followed by themed schools within the school (thematic multi-grade interdisciplinary SLCs)
- Themed school(s) within the school (thematic multi-grade interdisciplinary SLCs)
- Teachers synchronously teaming, sharing students in real time
- Other

SLC = Small Learning Community

Responses were:

## TABLE TEAM 1

### School Structure

### High school focus

- Rank the following, from (1=) most appropriate to least appropriate

SCHOOL STRUCTURE: HIGH	
HIGH SCHOOL ORGANIZATIONAL MODELS	TT
	1
A. Departmental model Grades 9-12	6
B. Freshman SLC, followed by Departmental Grades 10-12	3
C. Interdisciplinary SLCs (Teachers “teaming,” sharing students but separately teaching curriculum specialties)	2
D. Freshman SLC, followed by themed schools within the school (thematic multi-grade interdisciplinary SLCs)	4
E. Themed school(s) within the school (thematic interdisciplinary SLCs)	5
F. Teachers synchronously teaming, sharing students in real time	7
G. Other	1

- Analyze your most appropriate one: **C + G**

### a. Elaboration:

- 6 - 7
  - ✓ Making things
  - ✓ Team model
- 8 - 9
  - ✓ Transitional model
  - ✓ Integrated
- 10 - 12
  - ✓ Interdisciplinary – SLC
  - ✓ Teaming – curriculum, specials
  - ✓ School within school academy
  - ✓ Long-distance learning options

### b. Combine possibilities if desired

### c. Pros

- Deal with transition issues
- Instructor/style match level (age) (skills)





- Allows progress
- More AP

**Cons**

- Scheduling

**d. Mitigate the Cons:**

- Flexibility

**TABLE TEAM 2**

**School Structure**

**Middle school focus**

1. Rank the following, from (1=) most appropriate to least appropriate

SCHOOL STRUCTURE: MIDDLE	
MIDDLE SCHOOL ORGANIZATIONAL MODELS	TT
	2
A. Departmental model	7
B. Grade Level SLCs (Teachers "teaming," sharing students but separately teaching curriculum specialties)	5
C. Grade Level SLCs, as choice B but add teachers looping	4
D. Multi-grade SLCs	6
E. Themed school(s) within the school (thematic multi-grade interdisciplinary SLCs)	3
F. Teachers synchronously teaming, sharing students in real time	2
G. Other	1

2. Analyze your most appropriate one: E + F

**a. Elaboration:**

- E + F - multi-grade = G
- Themed Small Learning Communities with teachers teaming
- Sharing students
- Interdisciplinary project-based lessons
- Single grade
- Students choose theme to follow (rank preferences)
  - ✓ 8 Hum STEM
  - ✓ 7 Hum STEM

- ✓ 6 Hum STEM

**b. Combine possibilities if desired**

**c. Pros**

- Get to know students well
- Shared teacher prep
- Collaboration
- Support
- Investment
- Accountability
- Variety of perspectives

**Cons**

- Need more PD
- Complacency

**d. Mitigate the Cons:**

- Rotate teachers to avoid complacency
- Good supervision

**TABLE TEAM 3**

**High school focus**

1. Rank the following, from (1=) most appropriate to least appropriate

SCHOOL STRUCTURE: HIGH	
HIGH SCHOOL ORGANIZATIONAL MODELS	TT
	3
A. Departmental model Grades 9-12	5
B. Freshman SLC, followed by Departmental Grades 10-12	3
C. Interdisciplinary SLCs (Teachers "teaming," sharing students but separately teaching curriculum specialties)	4
D. Freshman SLC, followed by themed schools within the school (thematic multi-grade interdisciplinary SLCs)	1
E. Themed school(s) within the school (thematic multi-grade interdisciplinary SLCs)	2
F. Teachers synchronously teaming, sharing students in real time	6
G. Other	7

2. Analyze your most appropriate one: D





- a. **Elaboration:**
  - o Have exploratory classes as freshman and then move into interested area
    - ✓ 12,11,10 – 175
    - ✓ 9 – 200
- b. **Combine possibilities if desired**
- c. **Pros**
  - o Appeal to student interest
  - o Separate freshman
    - ✓ 9<sup>th</sup> = transitional year
    - ✓ Developmentally different
    - ✓ Connect to teachers
- Cons**
  - o Fewer exposures to other teachers/interests
- d. **Mitigate the Cons:**
  - o Same “core”
  - o Allow for movement
  - o Rotate teachers

#### TABLE TEAM 4

##### Middle school focus

1. Rank the following, from (1=) most appropriate to least appropriate

SCHOOL STRUCTURE: MIDDLE	
MIDDLE SCHOOL ORGANIZATIONAL MODELS	TT
	4
A. Departmental model	6
B. Grade Level SLCs (Teachers “teaming,” sharing students but separately teaching curriculum specialties)	4
C. Grade Level SLCs, as choice B but add teachers looping	5
D. Multi-grade SLCs	3
E. Themed school(s) within the school (thematic multi-grade interdisciplinary SLCs)	1
F. Teachers synchronously teaming, sharing students in real time	2
G. Other	

#### 2. Analyze your most appropriate one: E

- a. **Elaboration:**
  - o Three houses in school (same but separated by grade) example: arts/STEM/humanities/civics (6,7,8)
  - o Same core curriculum taught in each House with focus on specialty during Encore and project-based (projects involve all three grade levels 6-8)
- b. **Combine possibilities if desired**
- c. **Pros**
  - o Students choice
  - o Peer teaching/peer leadership
    - ✓ 8 STEM, arts, humanities
    - ✓ 7 STEM, arts, humanities
    - ✓ 6 STEM, arts, humanities
- d. **Cons**
  - o Balancing the houses
  - o Student choice (friends versus strengths)
- e. **Mitigate the Cons:**
  - o By using PBL, PLC, and collaborating 5th grade –focus on identifying student strengths
  - o (ASVAB) like assessment as one measure
  - o Summer – transition program
  - o Sampling each “House” for incoming students

#### SUMMARY

This chart on the next page shows the overall ranking of the organizational choices:



SCHOOL STRUCTURE: MIDDLE					
MIDDLE SCHOOL ORGANIZATIONAL MODELS	Table Team				
	1	2	3	4	OV'ALL RANK
G. Other		1			0.5
E. Themed school(s) within the school (thematic multi-grade interdisciplinary SLCs)		3		1	2.0
F. Teachers synchronously teaming, sharing students in real time		2		2	2.0
B. Grade Level SLCs (Teachers "teaming," sharing students but separately teaching curriculum specialties)		5		4	4.5
C. Grade Level SLCs, as choice B but add teachers looping		4		5	4.5
D. Multi-grade SLCs		6		3	4.5
A. Departmental model		7		6	6.5
SCHOOL STRUCTURE: HIGH					
HIGH SCHOOL ORGANIZATIONAL MODELS	Table Team				
	1	2	3	4	OV'ALL RANK
D. Freshman SLC, followed by themed schools within the school (thematic multi-grade interdisciplinary SLCs)	4		1		1.7
B. Freshman SLC, followed by Departmental Grades 10-12	3		3		2.0
C. Interdisciplinary SLCs (Teachers "teaming," sharing students but separately teaching curriculum specialties)	2		4		2.0
E. Themed school(s) within the school (thematic multi-grade interdisciplinary SLCs)	5		2		2.3
G. Other	1		7		2.7
A. Departmental model Grades 9-12	6		5		3.7
F. Teachers synchronously teaming, sharing students in real time	7		6		4.3

## LEARNING MODALITIES

This was the challenge:

### LEARNING MODALITIES

Here is a list of learning modalities. Which are most appropriate? Which ones should we be using most at our future high school or middle school? Which ones the least?

#### Personal reflection:

- Personally rank them in order of appropriateness for learning
- Focus on the 4 most and the 2 least appropriate
  - Appropriateness implies extensive application

#### Group consensus discussion:

- Then debate with your Table Team members. Persuade them if you can
- When you vote no need to pay attention to your table mates

#### Then vote with your dots:

- Green dots for the top 4. Red for the bottom 2

4      2  
Most    Least

- |   |       |       |
|---|-------|-------|
| A. Direct teaching                        | _____ | _____ |
| B. Lecture (sustained direct teaching)    | _____ | _____ |
| C. Seminar instruction                    | _____ | _____ |
| D. Teacher team/synchronous collaboration | _____ | _____ |
| E. Independent study                      | _____ | _____ |
| F. Small group work/student collaboration | _____ | _____ |
| G. Peer tutoring/teaching                 | _____ | _____ |



- H. Internships \_\_\_\_\_
- I. Project-based learning \_\_\_\_\_
- J. Project-based learning \_\_\_\_\_
- K. Making things, prototyping \_\_\_\_\_
- L. Interdisciplinary learning \_\_\_\_\_
- M. Thematic/integrated learning \_\_\_\_\_
- N. Integrated arts learning \_\_\_\_\_
- O. Social/emotional learning \_\_\_\_\_
- P. Student presentations \_\_\_\_\_
- Q. Computer-based: adaptive learning, games \_\_\_\_\_
- R. Blended learning/flipped classroom \_\_\_\_\_
- S. Distance learning \_\_\_\_\_
- T. Technology with mobile devices \_\_\_\_\_
- U. Technology with desktop devices \_\_\_\_\_

The responses were:

- A Direct teaching
  - Red 3 ☹️
- B Lecture
  - Red 8 ☹️
- C Seminar
  - Green 4 😊
  - Red 3 ☹️
- D Teacher teaming/synchronous
  - Green 1
- E Independent study
  - Red 2
- F Small group work/student collaboration
  - Green 5 😊
- G Peer tutoring/teaching
- H Internships/service

- I Service Learning
- J PBL
  - Green 9 😊
- K Making Things
  - Green 1
- L Interdisciplinary
  - Green 3
- M Thematic
  - Green 2
- N Integrated Arts
  - Green 1
- O Social/emotional
  - Green 1
- P Student Presentation
- Q Computer-based/adaptive
  - Green 3
- R Blended/flipped
  - Green 5 😊
- S Distance
  - Red 2
- T Mobile Technology
  - Green 1
- U Desktop Technology





## Notes Workshop Day 2

### AGENDA

The second high school-middle school Visioning Workshop was held on 16<sup>th</sup> June 2016. Notes of all activities follow:

- School Transformation + Development Map
- Middle School/High School Relationships
- Future Furniture
- Places for Learning
- Overall School Organization Diagram

### SCHOOL TRANSFORMATION + DEVELOPMENT MAP

Workshop participants used the School Transformation + Development Map (ST+DM © 2016 Frank Locker Inc) to evaluate Saugus' current high school and middle school educational deliveries and facilities, and to project the desired future for both.

The ST+DM expresses the evolutionary shift in education in great detail, chronicling educational practices and facility design. Schools today are in different points of evolution, and many schools expect to be in different points of evolution in the long term future. The ST+DM characterizes schools and facilities on a 1 through 5 basis, with 1 as the most traditional category, and 5 as the most transformed.

Workshop participants worked in three-person Micro Teams to review the multiple educational practices and facilities concepts in the School Transformation + Development Map. Students formed their own Micro Team. Schools were scored in the following categories:

- Educational Delivery Now
- Facilities Now
- Future Educational Delivery
- Future Facilities

The scores are shown on the next page:



SCHOOL TRANSFORMATION + DEVELOPMENT MAP					
Middle School Focus		EDUCATION		FACILITIES	
Micro Team	Team #	Now	Future	Now	Future
Teresa, Linda	1	2.64	4.81	2.56	4.95
Greg, Kerry, Nancy, Bill	2	1.30	4.61	1.47	4.69
AVERAGE		1.97	4.71	2.02	4.82
		difference =	2.74	difference =	2.81
High School Focus		EDUCATION		FACILITIES	
Micro Team	Team #	Now	Future	Now	Future
Gail, Steve, Seth	3	1.33	4.24	1.73	4.51
AVERAGE		1.33	4.24	1.73	4.51
		difference =	2.91	difference =	2.78

## MIDDLE SCHOOL-HIGH SCHOOL RELATIONSHIPS

The Visioning Team first conferred as Table Teams and then worked as a whole group to identify the most appropriate connections and separations in a future building serving both the middle school and high school. The organized functions into four possible categories:

- Separate middle school functions, not shared at all with the high school
- Shared spaces, serving both high school and middle school at the same time
- Time shared spaces, serving both middle school and high school, but in separate periods of the day
- Separate high school functions, not shared at all with the middle school

The functions identified for each category are outlined below. Some have locational notes:

- A "C" indicates that the function should be located for easy access by the community
- Essential adjacencies are noted

### SEPARATE MIDDLE SCHOOL FUNCTIONS

- Most core learning studios

- PE/Athletic Locker Rooms
- Guidance
  - Nearby HS guidance
- Assistant Principal
  - Near guidance and kids
- Nurse
  - Adjacent to HS nurse
- Adjacent counselor
  - Near HS Adjacent counselor
- Cafeteria
  - Folding wall to allow combination with HS cafeteria
- Principal
  - Close to HS

### SHARED FUNCTIONS

- Library/Media Center/Learning Commons
  - With zoning for HS and MS within
- Phys Ed Teacher Planning Center
  - Share with core teachers or others
- Athletic trainer
- OT/PT/Speech
- BCBA – school psychologist
- Food Service Kitchen
- District Technology Office
- District Superintendent offices

### TIME SHARED FUNCTIONS

- Black Box (C)
- Auditorium (C)
- Stagecraft Room/Shop
- Main Gym (C)
  - Varsity sports
- Small Gym (C)
  - Explore combining main Gym and Small Gym to create a Field House
- Fitness Center (C)
- Computer Labs
  - Only for large screen needs
- Creative Labs
- Program Labs such as for math or writing
- Maker Space



- STEM Lab
- Some Learning Studios (formerly called Classrooms)
- Performing arts suite
  - Exact nature of time share TBD
- Visual Arts
- Health Studios

### SEPARATE HIGH SCHOOL FUNCTIONS

- Most core Learning Studios
- PE/Athletic Locker Rooms
- Guidance
  - Nearby MS guidance
- Assistant Principal
  - Near guidance and kids
- Nurse
  - Adjacent to MS nurse
- Adjustment Counselor
  - Near MS
- Cafeteria
  - With folding wall to combine with MS Cafeteria
- Principal's Office

### FUTURE FURNITURE

Frank Locker presented future furniture concepts, focusing on Learning Studios (Classrooms) and Breakout/Collaboration spaces. See Appendix Ch 5.5. Workshop participants rated the appropriateness of the concepts presented on each slide. Here are their thoughts:

### HIGH SCHOOL FOCUS

	Like	Don't Like
2. Classrooms	1	8
3. Classrooms		7
4. Classrooms		7
5. Classrooms	7	1
6. Classrooms	8	1
7. Classrooms	8	
8. Classrooms		
9. Classrooms + Breakout Animation	9	
10. Classrooms	7	1
11. Classrooms	5	4
12. Classrooms	7	1
13. Classrooms	6	2
14. Classrooms	5	4
15. Classrooms Steelcase	7	2
16. Classrooms	8	1
17. Classrooms	8	1
18. Classrooms Steelcase	9	
19. Breakout	4	5
20. Breakout Spaces	6	2
21. Breakout Spaces	2	6
22. Breakout Spaces	7	1
23. Breakout Spaces	4	4
24. Breakout Spaces	8	1
25. Breakout Spaces	6	3
26. Breakout Spaces	7	1
27. Breakout Spaces	7	1
28. Breakout Spaces	2	6
29. Breakout Spaces	6	2
30. Maker Space D School	8	
31. Maker Space D School	7	
32. Maker Space D School	8	
33. Maker Space D School	8	



## MIDDLE SCHOOL FOCUS

Like Don't Like

2. Classrooms		6
3. Classrooms	1	4
4. Classrooms	2	3
5. Classrooms	6	
6. Classrooms	5	1
7. Classrooms	5	
8. Classrooms		
9. Classrooms + Breakout Animation	6	
10. Classrooms	4	
11. Classrooms	6	
12. Classrooms	4	1
13. Classrooms	4	1
14. Classrooms	4	1
15. Classrooms Steelcase	4	1
16. Classrooms	5	
17. Classrooms	6	1
18. Classrooms Steelcase	6	
19. Breakout	1	6
20. Breakout Spaces	4	2
21. Breakout Spaces	3	3
22. Breakout Spaces	4	1
23. Breakout Spaces	4	
24. Breakout Spaces	5	
25. Breakout Spaces	5	
26. Breakout Spaces	5	1
27. Breakout Spaces	5	
28. Breakout Spaces	2	4
29. Breakout Spaces	2	3
30. Maker Space D School	6	
31. Maker Space D School	6	
32. Maker Space D School	6	
33. Maker Space D School	5	

## PLACES FOR LEARNING

The workshop participants analyzed places for learning and established preferences for the future middle and high schools. Options were reviewed, ranked, and evaluated by Table Teams.

Workshop participants were asked to:

- Rank the choices
- Identify the three most appropriate for their future school(s)
- Identify the one least appropriate
- Explain why

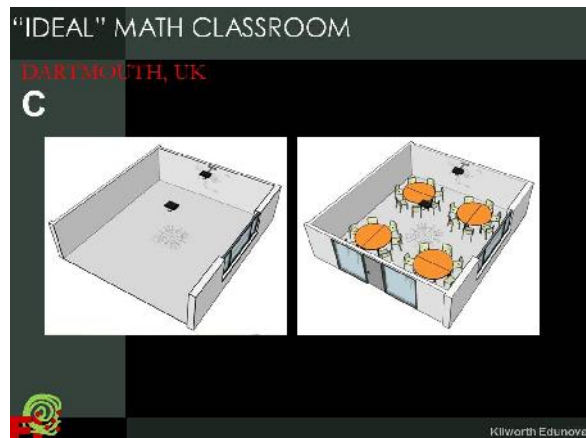
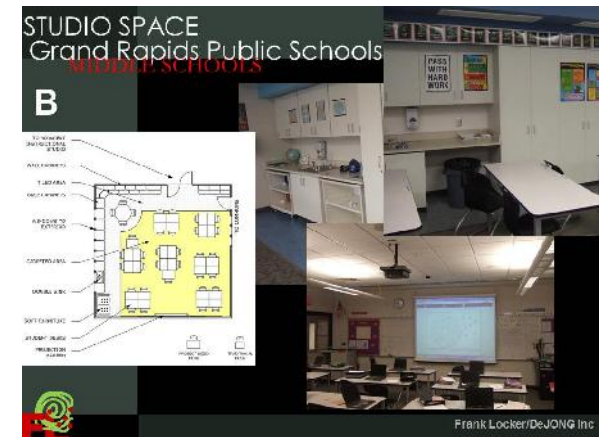
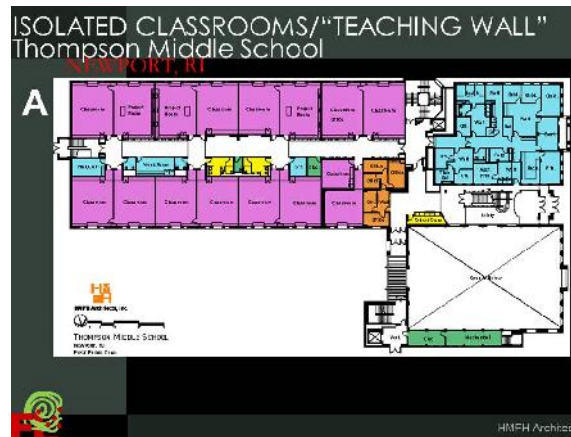
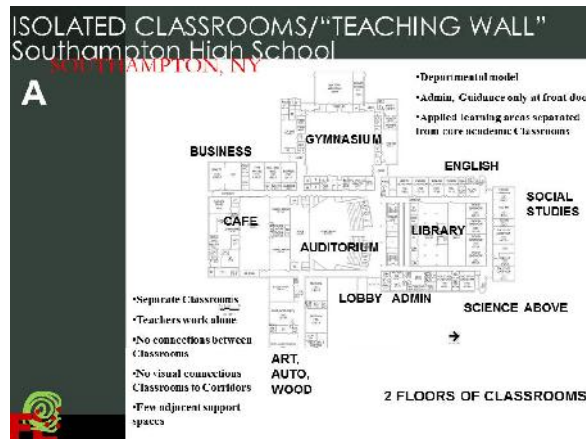
The physical places shown in the challenge were proxy for educational deliveries. While reviewing these physical places, participants were actually projecting the future of learning, and how to best support it.

Each of the exemplars reviewed by the workshop participants supports a range of learning modalities, and can best support different teaching deliveries and student activities. No single exemplar supports every possible delivery and activity.

The contenders were:

- A Southampton High School + Thompson Middle School
- B Grand Rapids Middle Schools
- C Ideal Math Classroom
- D Ipswich Middle School
- E Old Town Elementary School
- F Bryan High School/Middle School
- G Waverly High School
- H Cristo Rey High School
- I Concord Elementary Schools
- J New Tech High
- K Forest Avenue K-2 Center
- L Australian Science + Math School
- M Milan HS Center for Innovative Studies

Images for these contenders are shown on the following pages:



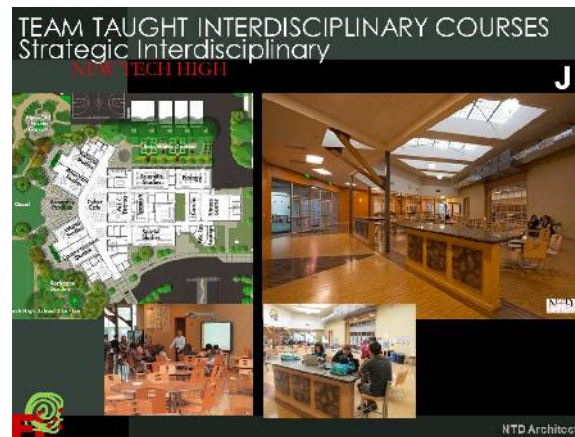
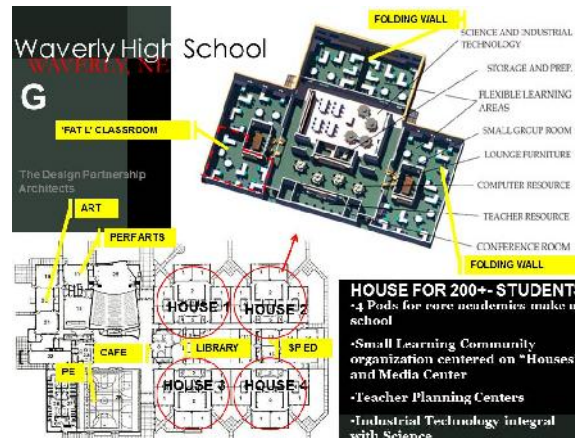




Table Team responses were:

#### TABLE TEAM 1

##### High school focus

##### Three Most Appropriate

- E Old Town Elementary School
  - Collaborative shared spaces
  - Flexible walls
  - Centralized Small Learning Communities
  - Good central areas for all
- G Waverly High School + F Bryan High School/Middle School
  - F looks like it would fit well inside the larger model of G
  - Collaborative shared spaces
  - Flexible walls
  - Centralized Small Learning Communities
  - Good central areas for all
- H Cristo Rey High School
  - Flexible walls
  - Centralized Small Learning Communities
  - Good central areas for all

##### Least Appropriate

- A Southampton High School + Thompson Middle School
  - Traditional
  - Sprawling
  - Inflexible

#### TABLE TEAM 2

##### Middle school focus

##### Three Most Appropriate

- E Old Town Elementary School
  - Very flexible
  - Multi-use
  - Common spaces
- F Bryan High School/Middle School
  - Open
  - Flexible
  - Collaboration
- G Waverly High School
  - Flexible
  - Multi-use
  - Collaboration
  - Condensed
  - Cost-effective

\*Likes "H" too!





### Least Appropriate

- A Southampton High School + Thompson Middle School
  - Most traditional
    - ✓ Inflexible
    - ✓ Limiting

### TABLE TEAM 3

#### High school focus

#### Three Most Appropriate

- D Ipswich Middle School
  - “House” feel
  - Common usable space
  - Concern over diagonal walls
- H Cristo Rey High School
  - Flex walls
  - Openness
  - Glass
- G Waverly High School
  - “House” feel

### Least Appropriate

- A Southampton High School + Thompson Middle School
  - We already have this

### TABLE TEAM 4

#### Middle school focus

#### Three Most Appropriate

- D Ipswich Middle School
  - Lends itself well for collaboration
  - Good use of the center presentation area
- H Cristo Rey High School
  - Great flexible walls
  - Group space
  - Glass garage doors to extend classroom work areas
- J New Tech High
  - Great set-up for teamwork
  - Open student Cyber Café live areas
  - Tech look is more fitting for a 21<sup>st</sup> Century School

### Least Appropriate

- A Southampton High School + Thompson Middle School
  - Departmentalized – no sharing or collaboration

### DISCUSSION

The Visioning Team identified several exemplars that were cited multiple times:

#### Most Appropriate

- H Cristo Rey High School (cited by 3 of 4 Table Teams)
- G Waverly High School (3 of 4 Table Teams)
- D Ipswich Middle School (2 of 4)
- E Old Town Elementary School (2 of 4)
- F Bryan High School/Middle School (2 of 4)

#### Least Appropriate

- A Southampton High School + Thompson Middle School (cited by all 4 Table Teams)

## OVERALL SCHOOL ORGANIZATION DIAGRAM

Workshop participants guided Frank Locker in drawing an overall diagram of a co-located high school and middle school. Essential planning concepts included:

- One main entry
- Secure zone for learning spaces
- Community zone with functions commonly used by the community:
  - Gyms and Fitness
  - Auditorium
  - Cafeterias
- Overall building zones based on grade levels
  - Secure zone has two possible organizations:
    - ✓ Grade 6-8 middle school and Grade 9-12 high school as shown here
    - ✓ Grades grouped as proposed on day I by Table Team 1:
      - Grades 6-7

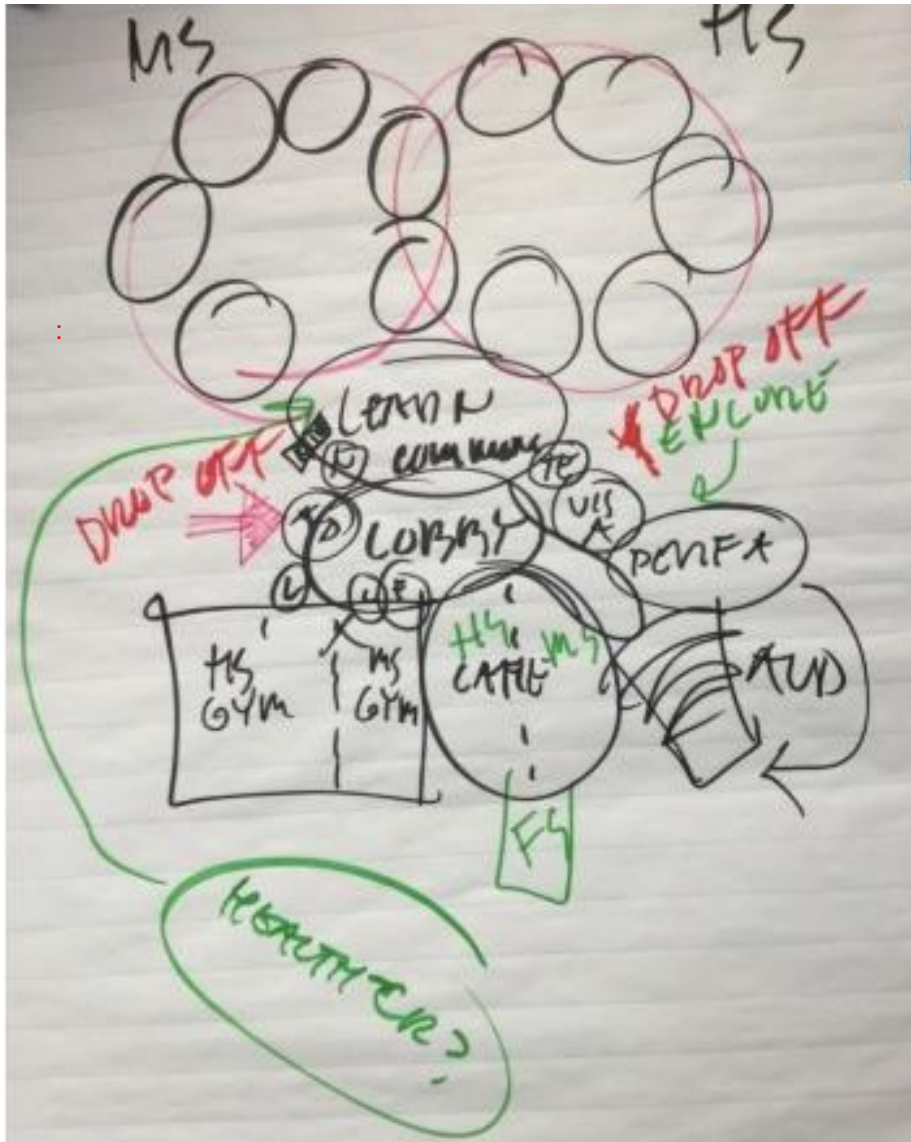





- Grades 8-9
- Grades 10-11-12
- Within each grade grouping:
  - Small Learning Communities (SLCs) for core learning spaces:
    - ✓ Collaboration zone at the heart of each
    - ✓ Teacher Planning Center
    - ✓ Satellite Learning Commons
    - ✓ Special Education spaces
    - ✓ Toilets for students and for teachers
    - ✓ Substantially separate Special Education spaces
- Teachers do not own classrooms
- Central Learning Commons as well as satellites
  - The heart of academic spaces
- Middle school and high school Cafeterias served by a single Food Service Kitchen
  - Cafeterias at the center of Community Zone could function as Food Courts/Lobbies
- Principals at the main entry
- Guidance and assistant principals close to learning spaces and central Learning Commons
- Specials/electives between the Auditorium and the SLCs:
  - Tech Labs
  - Maker Spaces
  - Visual Arts
  - Performing Arts
  - Family/Consumer Science
- Community Room/Parent Room in the Community Zone

The overall diagram is shown in two variations, here and on the next page:







**21<sup>st</sup> Century Schools**  
Middle-High School Visioning  
Saugus Public Schools

Frank Locker PhD  
fl@franklocker.com  
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### 21<sup>st</sup> Century Learning

20 <sup>th</sup> CENTURY TEACHER CENTERED	21 <sup>st</sup> CENTURY STUDENT CENTERED
<ul style="list-style-type: none"> <li>• Focus on teaching efficiency</li> <li>• Producing workers for an industrial age</li> <li>• Content knowledge</li> <li>• "Broadcast" teaching</li> <li>• Students work alone</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on learning effectiveness</li> <li>• Producing citizens for a post-industrial age</li> <li>• Relationships + skills</li> <li>• Personalized learning</li> <li>• Collaborative learning</li> </ul>
<ul style="list-style-type: none"> <li>• Content is abstracted</li> <li>• Teacher is holder of knowledge</li> <li>• Teacher works alone</li> <li>• Subjects taught separately</li> </ul>	<ul style="list-style-type: none"> <li>• Content is relevant</li> <li>• Teacher is a guide</li> <li>• Teacher collaboration + teams</li> <li>• Integrated/interdisciplinary learning</li> <li>• Problem-based/project-based learning</li> </ul>
<ul style="list-style-type: none"> <li>• Mostly direct instruction + papers</li> </ul>	

### Measures of Success?

HOW DO WE KNOW WE ARE DOING THE RIGHT THING?

- Standardized testing
- Course failure rates
- Attendance rates
- Graduation rates
- Student behavior
- Parent involvement
- College/post-secondary admission
- College/post-secondary graduation
- Others?

### Measures of Success?

HOW DO WE KNOW WE ARE DOING THE RIGHT THING?


What do students want to talk about at the dinner table every night?

### Learning Research

LEARNING PYRAMID

Rate of retention of different modes of learning

**ACTIVE LEARNING + RESPONSIBILITY CREATES MORE RETENTION THAN PASSIVE LEARNING**




The Learning Pyramid

NTL Institute for Applied Behavioral Science

### Learning Research

MULTIPLE INTELLIGENCES



Howard Gardner

- There are eight or more intelligences
- People are strong in some, not in others
- Every student's education should engage natural strengths, so they can develop others

Andrew Fabbio Graduate Student, Educational Technology SDSU

## Learning Research

### MULTIPLE INTELLIGENCES

2




- There are eight or more intelligences
- People are strong in some, not in others
- Every student's education should engage natural strengths, so they can develop others

Darshon Fabus Graduate Student, Educational Technology, SDSU

## Learning Research

### MULTIPLE INTELLIGENCES

2




- There are eight or more intelligences
- People are strong in some, not in others
- Every student's education should engage natural strengths, so they can develop others

Darshon Fabus Graduate Student, Educational Technology, SDSU

## Learning Research

### INTEGRATED ARTS

3

Core learning goes up when arts are integrated in core classrooms, especially for English language learners



"Give me a classroom big enough to dance in."



Franklin Middle School, W-Rising

## Learning Research

### STEM/SCIENCE-TECHNOLOGY-ENGINEERING-MATH

#### ADD THE ARTS AND GET STEAM

4



STEM Program, Newton North High School



Hanover High School, Hanover, MA

## Learning Research

### RELATIONSHIPS

5

#### MAGIC OF 150

#### Dunbar's Number

The theoretical cognitive limit to the number of people with whom one can maintain stable social relationships. These are relationships in which an individual knows who each person is, and how each person relates to every other person.

150 is really 100 to 225

#### GOOGLE THE "MAGIC OF 150"

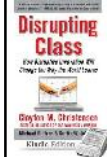
## Defining 21<sup>st</sup> Century Learning

### COMPUTER LEARNING

6

#### DISRUPTING CLASS

#### Clayton Christensen



- By 2014, 25% of HS courses will be on line
- By 2019, 50% of HS courses will be on line

## Defining 21<sup>st</sup> Century Learning

### ADAPTIVE LEARNING

The Knewton Adaptive Learning Platform consolidates data science, statistics, psychometrics, content graphing, machine learning, tagging, and infrastructure in one place in order to enable personalization at massive scale.

The Knewton platform can also provide concept-level analytics for students and teachers, pinpoint student proficiency measurement, content efficacy measurement, student engagement optimization, and more.

## Defining 21<sup>st</sup> Century Learning

### BLENDED LEARNING; FLIP THE CLASSROOM

## Learning Research

### BLOOM'S TAXONOMY

## Learning Research

### RIGOR + RELEVANCE

#### BLOOM'S TAXONOMY STATES OF KNOWLEDGE

EVALUATION 6	C	D
SYNTHESIS 5	Assimilation	Adaptation
ANALYSIS 4		
APPLICATION 3	A	B
COMPREHENSION 2	Acquisition	Application
AWARENESS 1		

1 KNOWLEDGE IN ONE DISCIPLINE 2 APPLY ACROSS DISCIPLINES 3 APPLY TO REAL-WORLD PREDICABLE SITUATIONS 4 APPLY TO REAL-WORLD UNPREDICABLE SITUATIONS 5

**APPLICATION**

Source: International Center for Leadership in Education - WWW.LeaderEd.com

## Learning Research

### RIGOR + RELEVANCE

#### Middle School

<b>A</b> Acquisition	<b>D</b> Adaptation
-------------------------	------------------------

- View an historical video and answer factual questions.
- Calculate volume of regular solids
- Construct models of molecules using toothpicks, marshmallows, and gumdrops.
- Look up the definition of the "word of the day."
- Analyze and debate the role of advertising in school
- Hold a competition to determine when using a calculator or doing mental math is most efficient.
- Collect data and make recommendations to address a community environmental issue.
- Create a Bill of Rights for your school or classroom.

Source: International Center for Leadership in Education - WWW.LeaderEd.com

## Learning Research

### RIGOR + RELEVANCE

#### High School

<b>A</b> Acquisition	<b>D</b> Adaptation
-------------------------	------------------------

- Write an essay on an historical topic
- Solve and graph linear equations
- Memorize elements in Periodic Table
- Research key aspects of the state constitution
- Develop guidelines for publishing content on Internet pages
- Create formulas to predict changes in stock market values
- Design and construct a robot
- Analyze a school/community problem, suggest a solution, and prepare a plan to solve it.

Source: International Center for Leadership in Education - WWW.LeaderEd.com

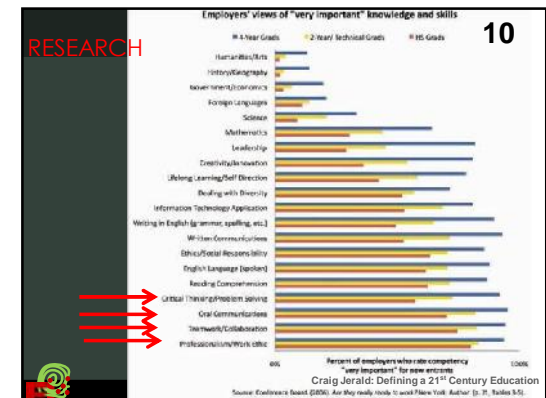
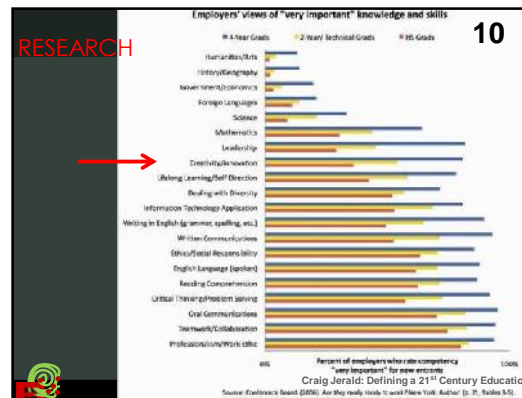
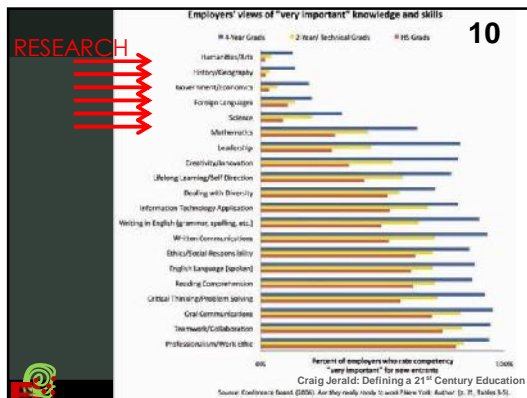
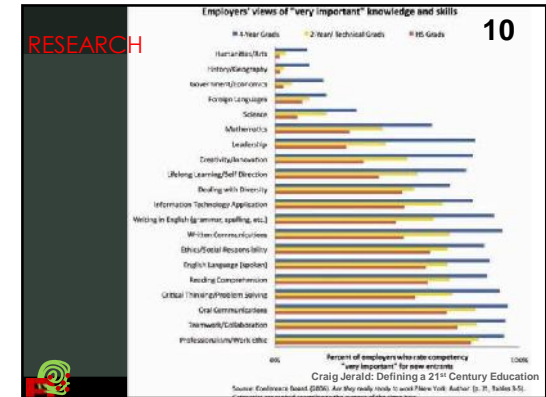
## Ch 5.3 21st Century Schools Presentation



**Partnership for 21<sup>st</sup> Century Skills**  
THE FOUR 'CS' 9

- Creativity + innovation
- Critical thinking + problem solving
- Communication
- Collaboration

Partnership for 21<sup>st</sup> Century Skills



## Learning Research

### PROJECT BASED LEARNING

11

There is ample evidence that PBL is an effective method for teaching students complex processes and procedures such as planning, communicating, problem solving, and decision making.

There is some evidence that PBL, in comparison to other instructional methods, has value for enhancing the quality of students' learning in subject matter areas, leading to the tentative claim that learning higher-level cognitive skills via PBL is associated with increased capability on the part of students for applying that learning in novel, problem solving contexts.

**Young Investigators**  
THE PROJECT APPROACH  
IN THE 21ST CENTURY

**A REVIEW OF RESEARCH ON PROJECT-BASED LEARNING** John W. Thomas, Ph. D, 2000

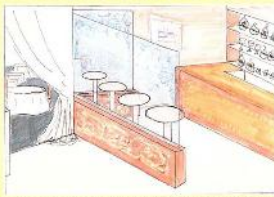
## Café Parisien

### ARLINGTON, MA, HIGH SCHOOL

11

### 21<sup>st</sup> Century Skills in Action: Arlington High School, Gr. 11

Honors French students were divided into small groups and asked to create a restaurant in France. Students used the Internet to research real estate listings, learned about the Euro to consider price options, selected a financial planning method based on interest rates and incentive programs, and used professional software to create a business and marketing plan aimed at their target clientele. Once the plans were complete students developed and priced their menus, sketched out the interior design and used architectural software to lay out the furniture. The project ended with oral presentations dove in both English and French. Local restaurant designers and architects were invited in to hear the English presentations. The project lasted the entire year, and was conducted entirely in French. More on this project: <http://www.doe.mass.edu/edtech/practices/art/intro.htm>.  
**21<sup>st</sup> century skills used in this project:** technology; collaboration; global awareness; media literacy; creativity; financial, economic, business and entrepreneurial literacy.



## Café Parisien

### ARLINGTON, MA, HIGH SCHOOL

11

### PROJECT REQUIREMENTS

- Business plan
- Real estate analysis (in Paris)
- Café name
- Café space design
- Café menu design
- Nutrition analysis
- Set prices for menu (Euros)
- Correlation of location-market demographics-menu-space design
- Speak French
- Outside experts
- Talk to students in France
- Location mapping
- Business plan spreadsheets
- Menu graphics
- Model of design
- Presentation to "jury"

Arlington HS 11<sup>th</sup> Grade French Class

## Café Parisien

### ARLINGTON, MA, HIGH SCHOOL

11





Arlington HS 11<sup>th</sup> Grade French Class

## 21<sup>st</sup> Century Learning: Deeper Learning

12

Special emphasis on the ability to apply knowledge to real-world circumstances and to solve novel problems





- Mastery of rigorous academic content
- Development of critical thinking and problem-solving skills
- The ability to work collaboratively
- Effective oral and written communication
- Learning how to learn
- Developing and maintaining an academic mindset

## Design Thinking

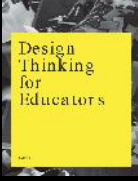
### Making Things to Learn

13

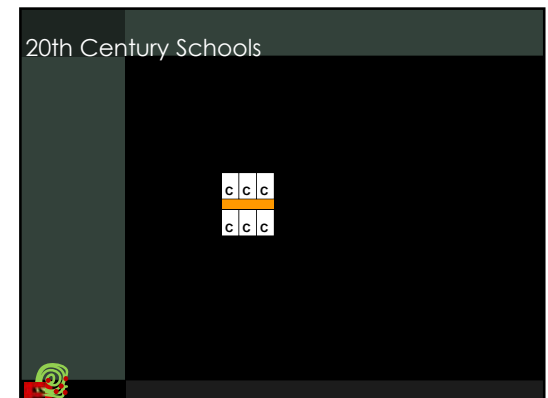
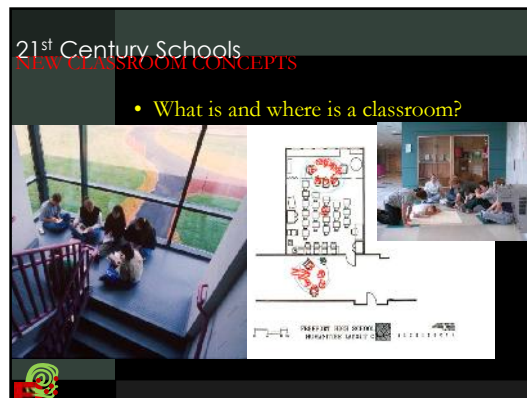
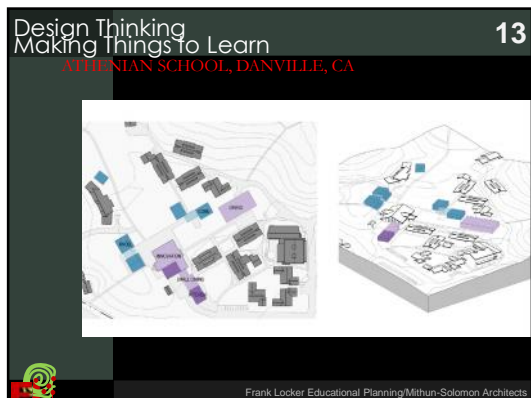


Project Zero  
Harvard  
Graduate  
School of  
Education

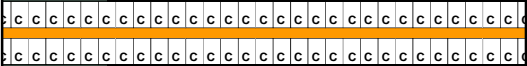
Harvard  
Graduate  
School of  
Design



Ideo



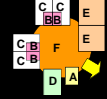
20th Century Schools



DISJOINTED CURRICULUM  
DELIVERED BY INDIVIDUAL  
TEACHERS IN ISOLATED  
SETTINGS

21<sup>st</sup> Century Schools

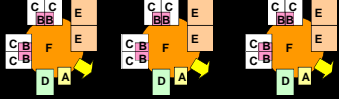
13



INTEGRATED CURRICULUM  
DELIVERED BY  
COLLABORATIVE TEACHERS IN  
A RELATIONSHIP-BASED  
SETTING

21<sup>st</sup> Century Schools


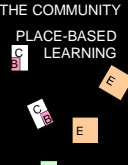
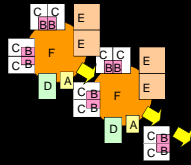
13



INTEGRATED CURRICULUM  
DELIVERED BY  
COLLABORATIVE TEACHERS IN  
RELATIONSHIP-BASED  
SETTINGS

21<sup>st</sup> Century Schools

14



INTEGRATED CURRICULUM  
DELIVERED BY  
COLLABORATIVE TEACHERS IN  
RELATIONSHIP-BASED  
SETTINGS

INTERNSHIPS +  
SERVICE LEARNING  
IN THE COMMUNITY

PLACE-BASED  
LEARNING

20<sup>th</sup> + 21<sup>st</sup> Century Furniture

15

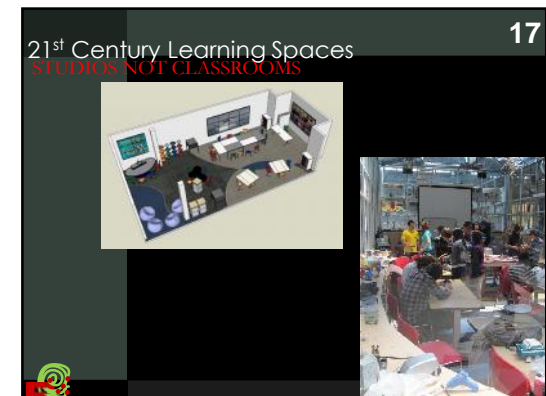
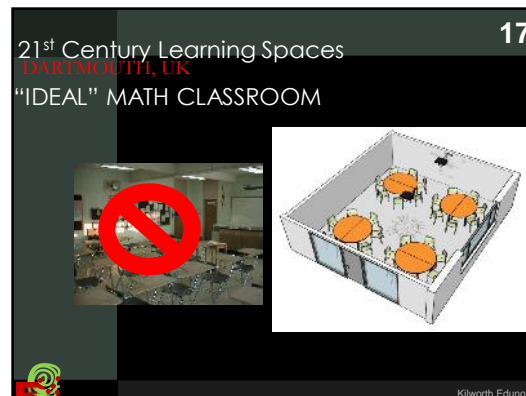
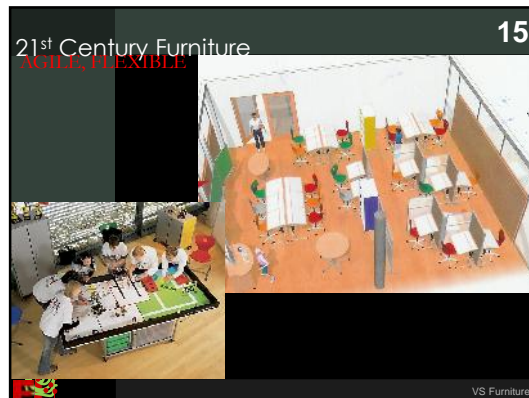


21<sup>st</sup> Century Furniture

15



VS Furniture



21<sup>st</sup> Century Learning Spaces  
MAKE LEARNING VISIBLE

17

High Tech High, David Stephen, Designer

Cedar Springs MS  
CEDAR SPRINGS, MI

18

Frank Locker, DeJONG Educational Planners, BetaDesign Architects

Oxford Hills Comprehensive High School  
SOUTH PARIS, ME

Relationships: Teacher Planning Centers

18

Frank Locker/PDT Architects

End of the Library as We Know it Today  
VICTORIA, AUSTRALIA DEPT EDUCATION

19

End of the Library as We Know it Today  
West Muskingum Elementary School  
ZANESVILLE, OH

19

Frank Locker Educational Planner/Fanning/Howey Associates Architects

End of the Library as We Know it Today  
HENRY JAMES MIDDLE SCHOOL, SIMSBURY, CT

19

Frank Locker Educational Planning/ Kaestle Boos Associates Architects

## End of the Cafeteria as We Know it Today 20

Glacier High School

Pine Grove Middle School

Solitude Middle School

Frank Locker Educational Planning

## Flexible Platform for Change 21

GLACIER HS, KALISPELL, MT

- Agile organizational planning
- 21st Century Skills
- Small Learning Communities
- College articulation

PE MEDIA CTR ART PERF ARTS  
SCIENCE SCIENCE  
MATH ENGLISH HISTORY

UPPER LEVEL

Frank Locker educational planner (DeJONG) CTA Architects

## Flexible Platform for Change 21

GLACIER HS, KALISPELL, MT

PE MEDIA CTR ART PERF ARTS  
INTEGRATED LEARNING  
INTERDISCIPLINARY CORE ACADEMIES  
BUSINESS

UPPER LEVEL

Frank Locker educational planner (DeJONG) CTA Architects

## Flexible Platform for Change 21

GLACIER HS, KALISPELL, MT

TCHR PLAN CENTER  
COMMON/BREAKOUT  
CLASSRMS  
PE MEDIA CTR ART PERF ARTS  
BUSINESS CAREER ACADEMY  
WELLNESS CAREER ACADEMY  
ARTS CAREER ACADEMY  
9TH YEAR TRANSITION

Frank Locker educational planner (DeJONG) CTA Architects

## Flexible Platform for Change 21

EAST LYME MS, EAST LYME, CT

900 students  
Grades 5-8

- Single Grade w/ Looping
- Multi-age

Floor G  
Floor 1  
Floor 2

Floor Associates Architects

## 21st Century Learning Spaces 22

MULTIPLE LEARNING MODALITIES

Grand Rapids Christian High School, Frank Locker Educational Planning/ AMDG Architects

### 21<sup>st</sup> Century Learning Spaces

**FLEXIBLE, AGILE SPACES**

22

Cristo Rey Jesuit School, Minneapolis, MN. Fielding Nair International

### West Woods Upper Elementary

**FARMINGTON, CT**

22

Upper Level Plan

JCJ Architects

### Helsinki Primary Schools

**HELSINKI, FINLAND**

22

TEACHER CENTER

CLASSROOMS

COMMONS/BREAKOUT

### Old Town Elementary School

**OLD TOWN, ME**

22

- Teacher Collaboration
- Community of Learners
- Authentic Assessments

KIVA COMMONS

TEACHER PLANNING CENTER

- Variety of Learning Styles
- Small School Culture

Frank Locker educational planner. PDT Architects

### Ipswich HS/MS

**Ipswich, MA**

22

SOC STUD

ENGLISH

COMMONS

MATH

SCIENCE

Flansburgh Associates Architects

### Blue Point School

**SCARBOROUGH, ME**

23

**K-2 MULTI-AGE CLASSROOMS**


"How can we teach children collaboration if every adult they see in the building is working alone?"

PDT Architects

New Tech High  
New Tech Network 23

**EDUCATIONAL ATTRIBUTES**

- 21<sup>st</sup> Century Skills
- Standardized testing scores significantly higher than comparative schools
- High university acceptance/attendance: 89%
- 1.5X national average university graduation rate: 80%
- 2X national university enrollment in science + math: 40%



NTD Architects

New Tech High  
New Tech Network 23

**LEARNING RESULTS**

CALIFORNIA STANDARDS TEST SCORES


	10 <sup>th</sup>	11 <sup>th</sup>
<b>Biology</b>		
NEW TECH HIGH		
•% Advanced	47%	47%
•% Proficient	25%	25%
<b>ALL COUNTY SCHOOLS</b>		
•% Advanced	19%	19%
•% Proficient	28%	18%
<b>ALL CALIFORNIA SCHOOLS</b>		
•% Advanced	21%	20%
•% Proficient	24%	22%

California Standardized Testing + Reporting (STAR) [www.star.cde.ca.gov/star](http://www.star.cde.ca.gov/star)

New Tech High  
New Tech Network 23

**SCHOOL ORGANISATION**

- Year levels 9-12
- 400 students per school maximum
- Integrated, interdisciplinary teaching
- 100% project-based learning
- Teacher teams (2 or 3 teachers, synchronous)
- Collaborative learning (2 to 4 student teams)
- Double block periods: 180 minutes
- 12 credits (1/2 year) university courses before graduation
- Internships
- Student generated senior project
- 1:1 computers since 1996



New Tech High  
New Tech Network 23

**INTERDISCIPLINARY/INTEGRATED TEACHING**


- Geography + Language Arts
- Computer Applications + Science
- Biology + Literature
- Math + Environmental Science
- Computer Apps + Language Arts
- Political Studies (Language Arts + Government + Economics)
- Math + Engineering
- Technology + Math
- Communication Studies (Lang Arts + Drama)
- Global Studies (Lang Arts + World History)
- American Studies (Language Arts + US History)
- Bio-Fitness (Biology + Health + PE)
- Spatial Studies (Digital Media + Geometry)

Taught by 2 teacher teams in 180 minute classes

New Tech High  
New Tech Network 23

**PROJECT BASED LEARNING**

- Initiated with an event
- Open-ended, essential question
- Interdisciplinary learning
- Teacher project preparation and student execution guided by rubrics
- Students work in teams
- Outside experts for initiation, check-in, and final review
- Projects create the "need to know"
- Supported by:
  - Direct teaching
  - Small group discussions
  - Homework
- Authentic evaluations
- Reflection afterward




NTD Architects

New Tech High  
New Tech Network 23

**SAMPLE PROJECTS**

- Animal Farm and Economics
- 1984 – Big Brother is Watching You
- Middle East Peace Conference
- CSI Investigation
- Imperialist Intervention in Haiti



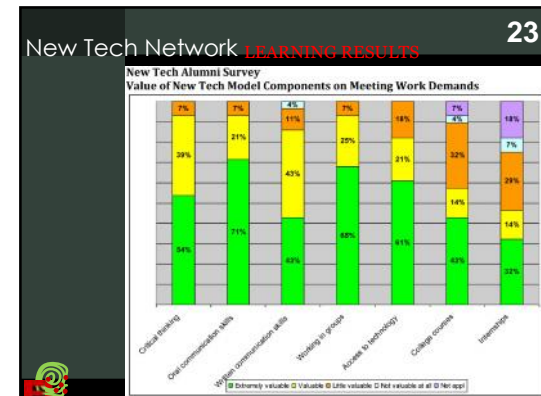
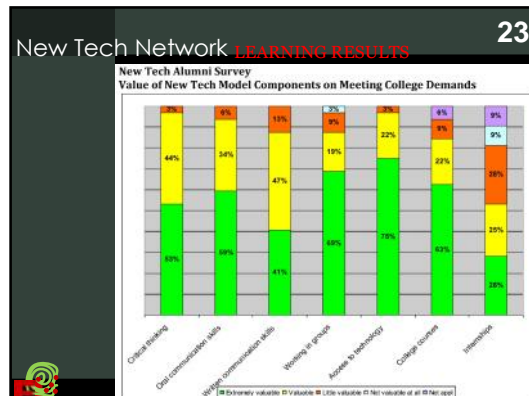


### New Tech High New Tech Network

**23**

**SAMPLE PROJECTS**

- Solar Energy**
  - Students research heat transfer and energy transformations to design a device that would capture the sun's energy and convert it into useful energy for cooking.
- Down to Earth**
  - Students investigate satellite orbits in order to determine the arc a satellite signal would cover, and use this information to find the number of satellites needed to cover the circumference of the Earth
- Iron Chef**
  - Students discover how the logic of chemical stoichiometry can be used every day in the kitchen

### Center for Innovative Studies MILAN, MI

**24**



**The End of the Classroom as We Know it Today**

Fanning/Howey Associates Architects



### Center for Innovative Studies MILAN, MI

**24**



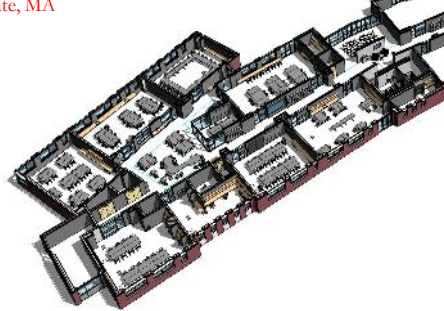
**The End of the Classroom as We Know it Today**

Fanning/Howey Associates Architects




### The End of the Classroom as We Know it Today Gates Middle School Schaute, MA

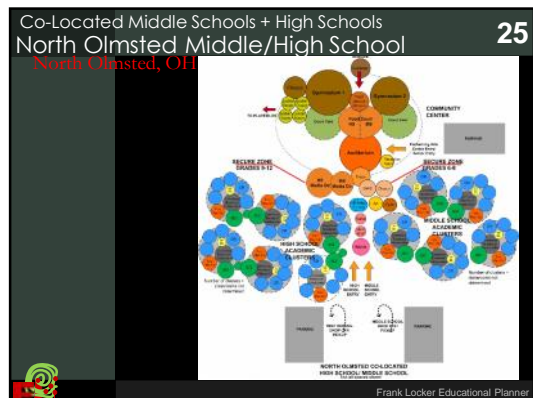
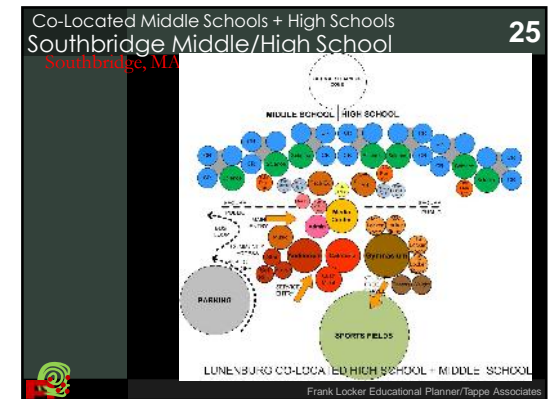
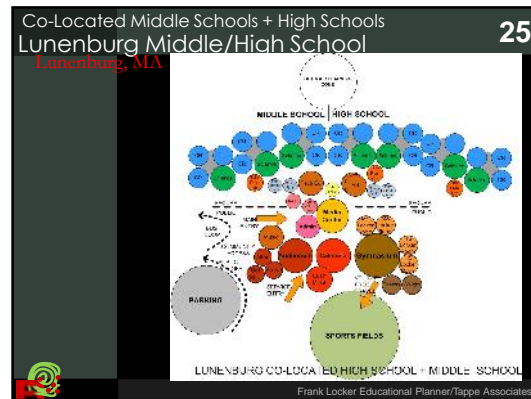
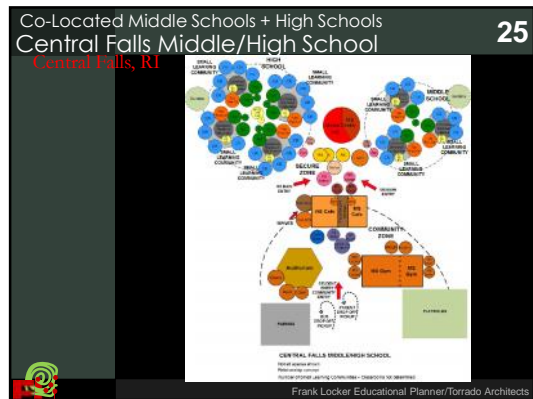
**24**

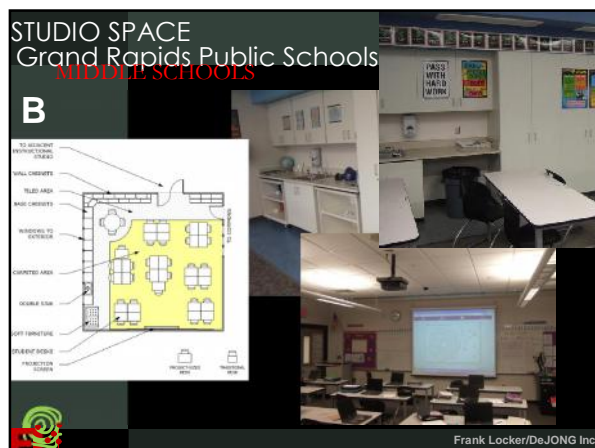
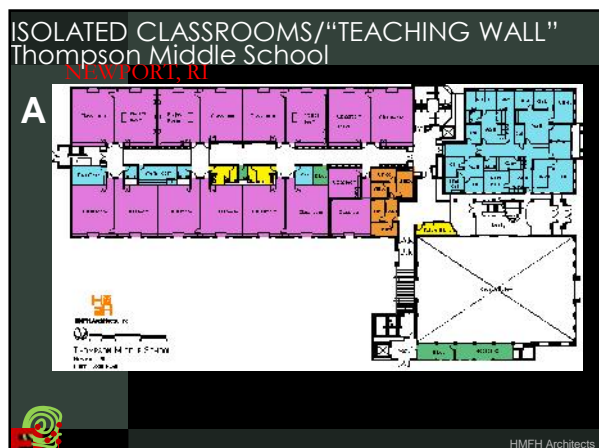
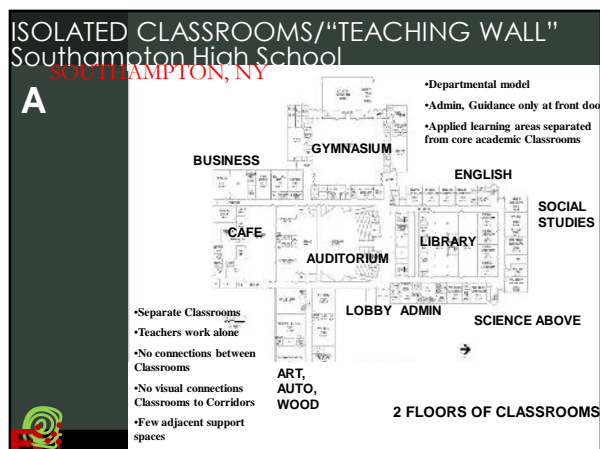
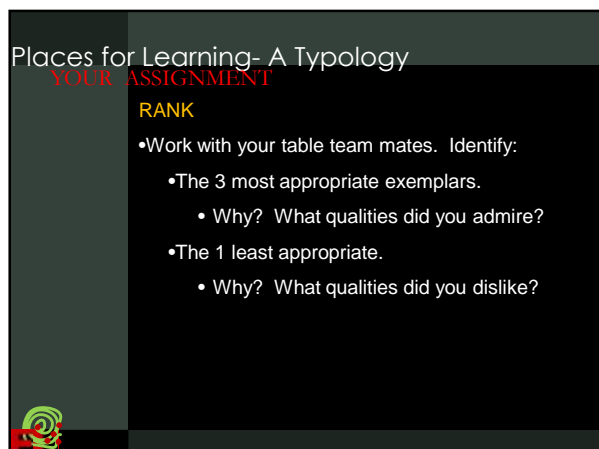
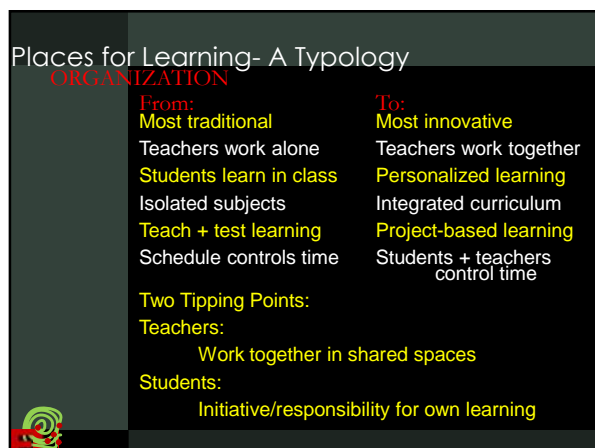
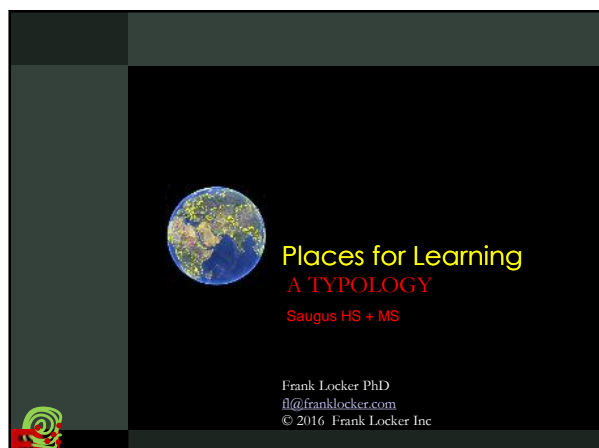


Frank Locker Educational Planner/Dore & Whittier Architects



## Ch 5.3 21st Century Schools Presentation

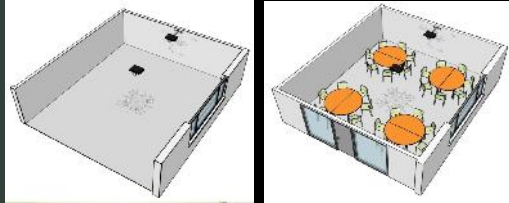




# "IDEAL" MATH CLASSROOM

DARTMOUTH, UK

C



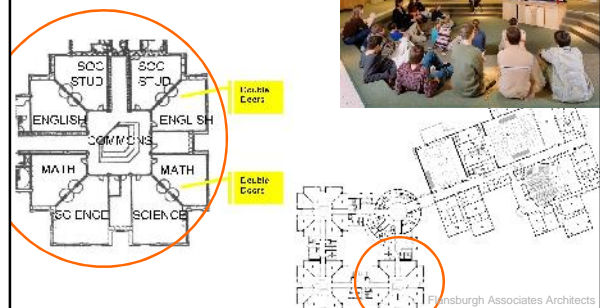
Kilworth Edunova

# CONNECTED STUDIOS WITH COMMONS

Ipswich Middle School

IPSWICH, MA

D



Fleming Associates Architects

# CONNECTED STUDIOS WITH COMMONS + SUPPORT

Old Town Elementary School

OLD TOWN, ME

E



Old Town Elementary School

Frank Locker Educational Planner/PDT Architects

# FLEXIBLE CLASSROOM SUITE

Bryan High School/ Middle School

BRYAN, OH

F



E=21<sup>st</sup> STUDIO  
EDUCATION SUITE FOR THE 21<sup>st</sup> CENTURY

Beilharz Architects

# FLEXIBLE CLASSROOM SUITE

Bryan High School/ Middle School

BRYAN, OH

F

CLOSED CONFIGURATION



E=21<sup>st</sup> STUDIO  
EDUCATION SUITE FOR THE 21<sup>st</sup> CENTURY

Beilharz Architects

# FLEXIBLE CLASSROOM SUITE

Bryan High School/ Middle School

BRYAN, OH

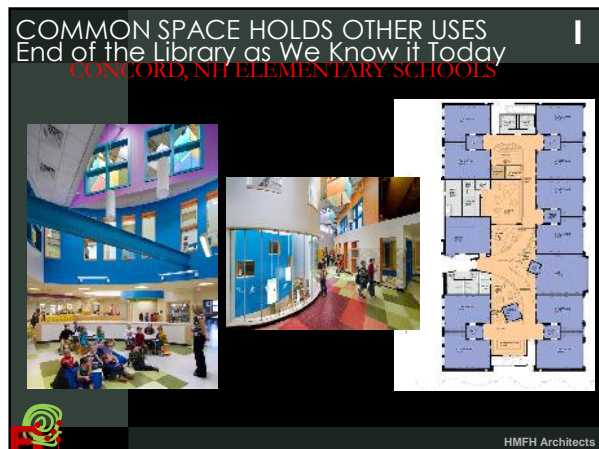
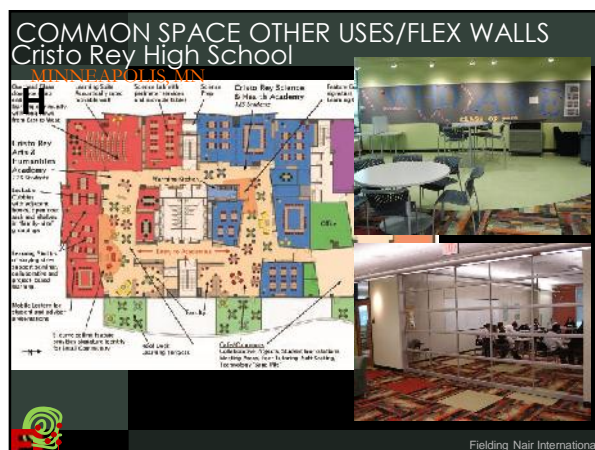
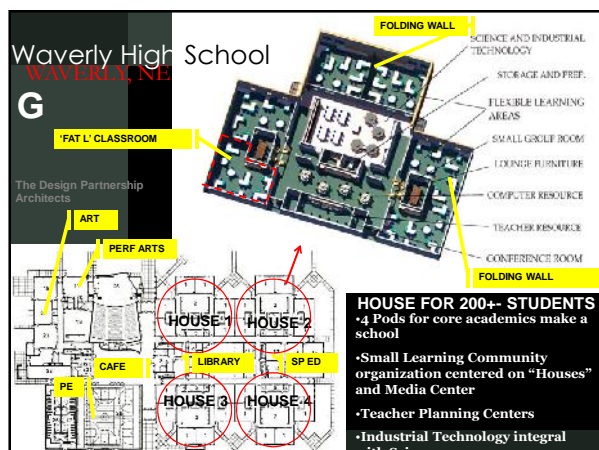
F

OPEN CONFIGURATION



E=21<sup>st</sup> STUDIO  
EDUCATION SUITE FOR THE 21<sup>st</sup> CENTURY

Beilharz Architects



### TEAM TAUGHT INTERDISCIPLINARY COURSES

Strategic Interdisciplinary  
NEW TECH HIGH

**J**

- 1:1 student computer ratio
- Use of projects to engage students: achieve deeper learning
- Integrate 21<sup>st</sup> Century skills
- 2 Person synchronous team teaching

NTD Architects

### SHARED STUDIOS + RESPONSIBILITY

Forest Avenue School K-2 Center  
MIDDLETOWN, RI

**K**

Teacher Teams, Multi-Age, Flexible Student Groups

4 Core Teachers + 2 Spl Ed Teachers + Specialists with 85 Students

Frank Locker/Fielding Nair International Educational Planners Litman Architects

### SHARED STUDIOS + RESPONSIBILITY

Forest Avenue School K-2 Center  
MIDDLETOWN, RI

**K**

Frank Locker/Fielding Nair International Educational Planners Litman Architects

### SHARED STUDIOS + RESPONSIBILITY

Forest Avenue School K-2 Center  
MIDDLETOWN, RI

**K**

Frank Locker/Fielding Nair International Educational Planners Litman Architects

### HIGHLY VARIED LEARNING SPACES

Australian Science + Mathematics School  
ADELAIDE, AUSTRALIA

**L**

Project-Based Learning

learning comm

Woods Bagot Architects

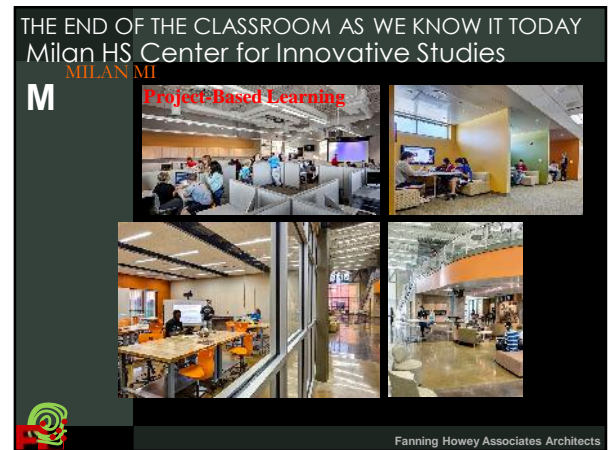
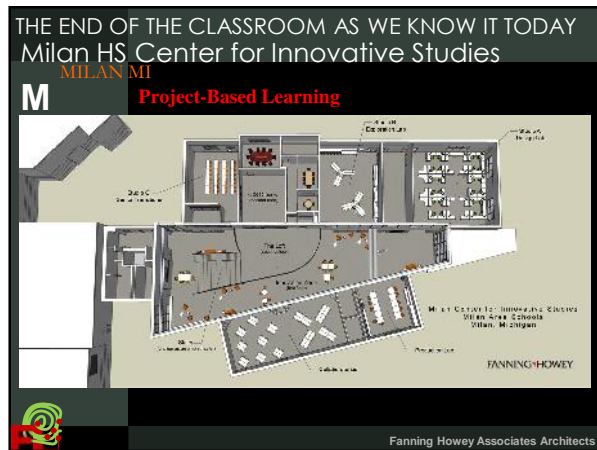
### HIGHLY VARIED LEARNING SPACES

Australian Science + Mathematics School  
ADELAIDE, AUSTRALIA

**L**

Project-Based Learning


Woods Bagot Architects




## Ch 5.5 Future Furniture Presentation

**Saugus Public Schools**


High School + Middle School  
Furniture Concepts


 Saugus Public Schools


Frank Locker Educational Planning  1

**Classrooms**

**TRADITIONAL MODEL, PERFECT FOR LECTURE + DIRECT INSTRUCTION**





 Saugus Public Schools


Frank Locker Educational Planning  2

**Classrooms**

**STUDENT RESPONSE TO TRADITIONAL INSTRUCTION**




 Saugus Public Schools

Frank Locker Educational Planning  3

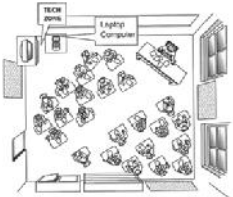
**Classrooms**

**School Furniture: Student Centered Learning – Steps 1 & 2**


A Series of Steps for Reconfiguring the Classroom to Reflect Student Empowerment:  
From Teacher to Student Centered




**Step 1:** Recognize that the typical classroom configuration and the mode of teacher-centered learning are unsatisfactory for twenty-first-century student-centered learning.



**Step 2:** Try something as simple as putting desks on a diagonal at a forty-five degree angle to the walls. Align desks so they are not all facing the teacher as sole provider of information. Define a tech zone.

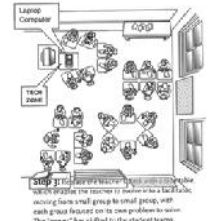
 Saugus Public Schools

Frank Locker Educational Planning  4


**Classrooms**


**School Furniture: Student Centered Learning – Step 3**


Small Group Facilitation



**Step 3:** Move the teacher to move into a tech zone, moving from small groups to small groups, with each group focused on its own problem to solve. The "power" has shifted to the student teams.



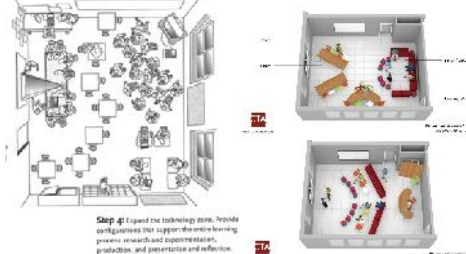
 Saugus Public Schools

Frank Locker Educational Planning  5


**Classrooms**


**School Furniture: Student Centered Learning – Step 4**

Learning Flexibility: Individual, Small/Large Group, Presentation



**Step 4:** Expand the technology zone. Flexible configurations that support the entire learning process: research and experimentation, production, and presentation and reflection. Support individual, small group, and large group learning. The balance of power has shifted to the "flexibly empowered" student.

 Saugus Public Schools

Frank Locker Educational Planning  6

## Ch 5.5 Future Furniture Presentation

## Classrooms

## School Furniture: Student Centered Learning – Step 5

Diffused Technology, Presentation, Display, Storage



Saugus Public Schools

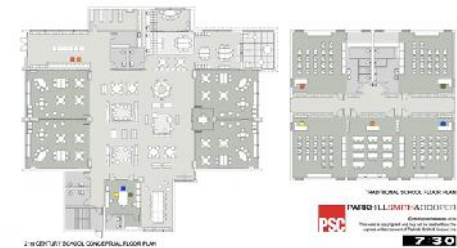
Frank Locker Educational Planning  7

## Classrooms + Breakout Spaces

The following slide is an animation of a high school setting comparing passive learning in traditional Classrooms with active learning using Breakout Spaces. It shows an entire day. The class periods are noted. The teachers are visible, as are the students.

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## Classrooms + Breakout Spaces

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## Classrooms

GOOGLE “21<sup>ST</sup> CENTURY LEARNING ENVIRONMENTS ” AND THESE IMAGES COME UP

PvGgPLAHUGAD4KHZcSY0Q4JLgzbw=10058b8f9c93abmrmisch8t8eirmg%3ACzCkUj97D68JjYKVGONWb1\_1lHshH8\_1DaxmH4HmlaD8bq8tj7ho7bD-d-  
Rt5cX8KHfKQ43FIOHCwOn18x67NCOscq8ZC2Vz8jEwNQYLcVVvKHJguGwH2b7ER8nT8jYXo8lqEgmeHgdwzdl7xuhH-  
dn2u5K0u9e3Q0u9aPEZ2cXxwH1eqKHJ5rmEKLaQGNRKRKXz2cWHz8jEgusdYUg4cKxHwYJ78j78j2yoSCXA8DcH2s0ET9W11RzLsg&q=21st%20c-  
nury%20learning%20environments&imgcr=

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## Classrooms

GOOGLE "21<sup>ST</sup> CENTURY LEARNING ENVIRONMENTS" AND THESE IMAGES COME UP

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## Classrooms

GOOGLE "21<sup>ST</sup> CENTURY LEARNING ENVIRONMENTS " AND THESE IMAGES COME UP

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## Ch 5.5 Future Furniture Presentation

**Classrooms**

GOOGLE "21<sup>ST</sup> CENTURY LEARNING ENVIRONMENTS " AND THESE IMAGES COME UP



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**Classrooms**

VARIETY OF FURNITURE IN EACH ROOM  
Creating multiple learning centers.




VS Furniture

Saugus Public Schools Frank Locker Educational Planning  14

**Classrooms**

STEELCASE LEARNLAB



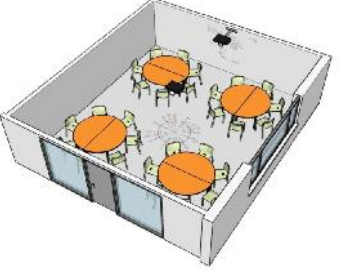
<https://www.youtube.com/watch?v=CnU58hbYN1M>  
<https://www.youtube.com/watch?v=tmWfNdZrlqQ>


Steelcase

Saugus Public Schools Frank Locker Educational Planning  15

**Classrooms**


ROUND TABLES: THE QUINTESSENTIAL COLLABORATION STATEMENT




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**Classrooms**

STAND UP DESKS  
Research shows student behavior improves when students can move while learning.




Safco AlphaBetter


Saugus Public Schools Frank Locker Educational Planning  17

**Classrooms**

FLEXIBLE FURNITURE



Steelcase Node Chair

Saugus Public Schools Frank Locker Educational Planning  18



## Ch 5.5 Future Furniture Presentation

### Breakout Spaces

#### COLLABORATION BOOTHS



### Breakout Spaces

#### FLEXIBLE MOVABLE DESKS



### Breakout Spaces

#### PRESENTATION AREAS



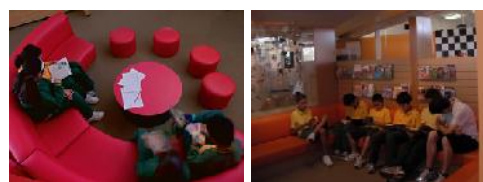
### Breakout Spaces

#### CARPETED PLACES TO SPRAWL OUT ON THE FLOOR



### Breakout Spaces

#### GROUP DISCUSSION AREAS



### Maker Space

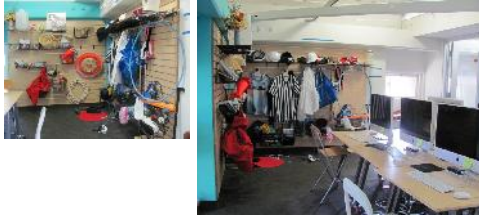
#### D SCHOOL, STANFORD UNIVERSITY, PALO ALTO, CA Probably the most famous university-level school in USA for PBL and Making Things to Learn



## Ch 5.5 Future Furniture Presentation

### Maker Space

**D SCHOOL, STANFORD UNIVERSITY, PALO ALTO, CA**  
Probably the most famous university-level school in USA for PBL and Making Things to Learn



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### Maker Space

**D SCHOOL, STANFORD UNIVERSITY, PALO ALTO, CA**  
Probably the most famous university-level school in USA for PBL and Making Things to Learn



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### Maker Space

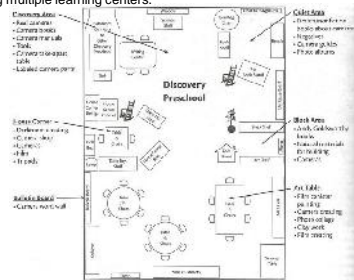
**D SCHOOL, STANFORD UNIVERSITY, PALO ALTO, CA**  
Probably the most famous university-level school in USA for PBL and Making Things to Learn



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### Classrooms

**VARIETY OF FURNITURE IN EACH ROOM**  
Creating multiple learning centers.



Judy Helm



Frank Locker Educational Planning 42







SCHOOL TRANSFORMATION + DEVELOPMENT MAP 3.1.7																									
Name(s)_____										School (District)_____															
MAINTAINING TRADITION				INITIATING CHANGE				PROGRESSIVE				TRANSFORMING				TRANSFORMED									
1				2				3				4				5									
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INCLUDES PRACTICES BELOW				INCLUDES PRACTICES BELOW				INCLUDES PRACTICES BELOW				INCLUDES PRACTICES BELOW				INCLUDES PRACTICES BELOW									
FACILITIES				N	F	FACILITIES				N	F	FACILITIES				N	F	FACILITIES				N	F		
ALL GRADES						ALL GRADES						ALL GRADES						ALL GRADES							
OVERALL PLANNING						OVERALL PLANNING						OVERALL PLANNING						OVERALL PLANNING							
1	SIZE/ CAPACITY	Circumstantial overall building size/capacity						School size set for administrative/operational efficiency; no small schools within						Efficient school size/capacity, semi-autonomous schools within school						Intentional building size/capacity to foster relationships; autonomous small schools/teacher teams within					
2	FUTURE PROOF	Spaces/furniture inappropriate for current educational methods: wrong sizes, locations, services, equipment						Spaces/furniture rigid: conceived to serve one concept of current educational models						Spaces/furniture allow several current educational deliveries with difficulty						Spaces/furniture flexible/agile to anticipate future educational trends					
3	COLLABOR- ATION	Facility makes it almost impossible for teachers to collaborate						Facility supports occasional/non-synchronous teacher collaboration						Facility supports regular/non-synchronous teacher collaboration						Facility supports teacher collaboration + control of schedule + space					
4	VISIBLE LEARNING	No attempt to make learning visible						Bulletin boards in corridors						Bulletin boards, display cases for academics						Learning highly visible through transparency, display, activities					
5	FLEXIBIL- ITY	Spaces rigid in design; no flexibility						Flexibility only in some folding partitions; never used						Flexibility in folding partitions; often used						Spaces flexible w/ minimal effort; agile for reuse w/o physical change					
6	SOCIAL SETTING	Circulation conceived in minimal terms of moving people: Corridors + lobbies only						Functional circulation with notable public expression at Lobbies						Circulation centers on social gathering space(s) as focus of school						Central social gathering space(s), "hang out" spaces + student centric social/work spaces					
7	EXPRES- SION	No intentional building expression						School colors are primary school signature						Special effort made at Main Entry; school colors prevail						School signature widely expressed throughout building					
8	SCHOOL ORGANI- ZATION	Plan based on single idea traditional of school organization: departmental, grade level, etc						Traditional planning but allows mixed grade levels						Flexible/agile school plan allows several school organizations; 9th grade house						Relationship-based plan to best support Column 5 educational delivery					
9	INTERDISC- IPLINARY	Building plan: highly separate, unrelated functional areas; does not facilitate public access to community uses						Building plan: highly separate, unrelated functional areas; zoned for public access to community spaces						Building plan strategically relates functional areas; zoned for public access to community spaces						Building plan links program areas for interdisciplinary learning among core + specials; zoned public uses					
10	MOVEMENT	Student movement expected to be across entire building; hall passes						Student movement controlled by teachers; hall passes						Building guides student movement within non-autonomous subzones						Small school or movement only within relationship zones; hall passes are passe					
11	AUTONOMY	Self-contained school but missing some functional spaces						Self contained school with all appropriate functions						Intended as self-contained but relies occasionally on nearby institutions for program use						Intentionally not self-contained: relies heavily on neighboring institutions					
12	COMMUNITY	No spaces for community use						Gym, Café, Auditorium occasional community use						Community access well planned + zoned						Public + private community spaces used regularly by students					
13	MIXED USE	Single use school building						School shares site with other public uses: Library, Recreation						School shares site with business/residential						School planned to partly convert to other uses when enrollments drop					
14	LEADERSHIP	Admin + Guid central but hard to find						Central Admin + Guid at front door						Central Admin; distributed Guidance spaces						Distributed Guid + Admin					
15	PARENTS/ VOLUNTRS	No spaces oriented to parents						Parents access Library or Admin						Parent Room						Parent Room + Volunteer Room					
		TOTALS																							

SCHOOL TRANSFORMATION + DEVELOPMENT MAP 3.1.7																			
Name(s)_____										School (District)_____									
MAINTAINING TRADITION			INITIATING CHANGE			PROGRESSIVE			TRANSFORMING			TRANSFORMED							
1			2			3			4			5							
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INCLUDES PRACTICES BELOW			INCLUDES PRACTICES BELOW			INCLUDES PRACTICES BELOW			INCLUDES PRACTICES BELOW			INCLUDES PRACTICES BELOW			TOTALS				
SPECIFIC SPACES				SPECIFIC SPACES				SPECIFIC SPACES				SPECIFIC SPACES							
16	TRANSPAR- ENCY	No windows to corridors			View panels at doors				Windows to Commons spaces, other Classrooms allow teachers to observe students working separately/independently				Abundant windows connecting all spaces, including Teacher + Admin						
17	GROUPING	Building conceived as unrelated Classrooms along Corridors			Classrooms related to others of similar use				Separate Classrooms arranged with others of different use to support interdisciplinary, multi age/grade learning				Building conceived as suites of flexible learning spaces						
18	SMALL GROUPS	No small learning spaces			Few small group learning spaces irregularly located									Variety of small learning spaces closely related to core spaces + Med Ctr					
19	ARTS	No Visual/Perf Arts spaces			Inadequate Visual/Perf Arts spaces				Spaces adequate, related to other "specials" but not related to core spaces				Adequate arts spaces located to integrate w/ core learning						
20	SPECIAL ED	Separate Spl Ed spaces			Spl Ed in ad hoc spaces converted from other uses, too big/too small				Spl Ed "pull out" model; Resource Rooms + Self Contained				Inclusion model; minimal exclusive Spl Ed spaces						
21	PE/ ATHLETICS	Inadequate space for Phys Ed			Gym for Phys Ed/Intramurals/Athletics				Multipurpose Gym designed with good acoustics for assembly use				Gym/Pe/Athletics facilities used by community						
22	TECH ED	No Tech Ed or "hands on" applied learning spaces			Tech Ed spaces, unrelated to core spaces							Tech Ed spaces easy access from core spaces			Tech Ed spaces integrated with core curriculum + spaces				
23	WET LABS	Highly specific labs: Science Labs designed for different sub sciences			Multi-purpose Science Labs; other disciplines separate										Labs are all flexible Wet Labs: Science=Art=Home/Fam=Tech Ed				
24	CLASS- ROOM SIZES	Irregular Classroom sizes seen as inequitable			Uniform Classroom size: equitable							Classroom sizes vary to match size of student groups			Variety of learning spaces supporting teachers collaborating with varied groups				
25	DRY LABS	Insufficient Computer Labs			Sufficient Computer Labs				Computer/Dry Labs flexible for future conversion to other uses				Laptop computers; no Labs needed						
26	MEDIA CTR	Media Ctr contains print media only			Media Ctr contains print + electronic media				Media Ctr demand reduced by classrooms contain electronic media				Media Ctr rethought as collaborative work/meeting/information place			Media Ctr partly virtual, distributed in several locations			
27	ASSEMBLY	Assembly needs not served by facilities			Assembly needs served poorly: in Gym or Café; no Stage				Cafetorium with adequate Stage				Auditorium sized for occasional peak use			Auditorium stage sized for teaching & learning, seating as few as possible			
28	TEACHER PLANNING	No common teacher spaces except Lounge or Dining			Conf Rooms for teacher use				Teacher "hotels" + Conf Rms for common planning time					Teacher Planning Ctrs with Conf + Food					
29	CONNEC- TIONS	Self contained classrooms with no connecting doors/walls			Folding walls between few classrooms, always closed				Doors/barn doors between classrooms				Variety of doors, folding walls, windows to adjacent spaces allow flexibility			Suites of flexible spaces for varied uses			

SCHOOL TRANSFORMATION + DEVELOPMENT MAP 3.1.7

Name(s)\_\_\_\_\_School (District)\_\_\_\_\_

MAINTAINING TRADITION

1

INITIATING CHANGE

2

PROGRESSIVE

3

TRANSFORMING

4

TRANSFORMED

5

INCLUDES PRACTICES BELOW

INCLUDES PRACTICES BELOW

INCLUDES PRACTICES BELOW

INCLUDES PRACTICES BELOW

INCLUDES PRACTICES BELOW

30

FOOD CHOICES + PREP

FOOD SERVICE

Menu includes no fresh food, one menu choice each day

SUSTAINABLE DESIGN

No sustainable design focus

FURN + EQUIP

Virtually no technology; no phones in classrooms

STUDENT FURNITURE

Single purpose connected desk/seats designed for lectures

CABINETRY

Little or no cabinets/shelving in teaching spaces

COMPUTER RATIO

10:1 student: computer ratio

FOOD SERVICE

Menu includes no fresh food, multiple menu options offered, breakfast & after school meals offered

SUSTAINABLE DESIGN

Building design focused on energy savings

FURN + EQUIP

Basic, non-integrated technology; intercom; no classroom phones

STUDENT FURNITURE

Desks w/ movable seats, not groupable

CABINETRY

Basic fixed cabinetry; not enough to serve needs

COMPUTER RATIO

6:1 student: computer ratio

FOOD SERVICE

Menu includes fresh, locally grown food, multiple menu options, breakfast + after school meals offered

SUSTAINABLE DESIGN

Building design incorporates energy savings, day lighting and low impact building materials

FURN + EQUIP

Partial integrated technology; classroom phones

STUDENT FURNITURE

Flexible desks + chairs, groupable

CABINETRY

Fixed cabinetry sufficient for basic needs

COMPUTER RATIO

4:1 student: computer ratio; selective use of laptops

FOOD SERVICE

Menu includes fresh, locally grown food, multiple menu options prepared by staff and learners, breakfast + after school meals offered

SUSTAINABLE DESIGN

Building design minimizes impact on environment, integrates design, construction and operation of building into curriculum

FURN + EQUIP

Integrated tech. including interactive bds, doc proj; controls for all to use

STUDENT FURNITURE

Flexible adjustable height ergonomic desks, chairs, bean bags

CABINETRY

Fixed cabinetry meets all storage needs

COMPUTER RATIO

2:1 student: computer ratio; laptops on carts

FOOD SERVICE

Menu includes fresh, locally grown food, multiple menu options. Grown and prepared by staff and learners, breakfast + after school meals offered

SUSTAINABLE DESIGN

Building seeks carbon neutral impact, integrates design, construction and operation of building into curriculum

FURN + EQUIP

Integrated technology; students use PDAs, cell phones, notebooks, Kindles

STUDENT FURNITURE

Students work in personal workspaces

CABINETRY

Flexible, adjustable cabinetry on wheels; groupable to change space

COMPUTER RATIO

1:1 student: computer ratio; laptops, PDAs, tablets for all

TOTALS

FACILITIES AVERAGE OVERALL SCORE

Col 1 = 1 point  
Col 2 = 2 points  
Col 3 = 3 points  
Col 4 = 4 points  
Col 5 = 5 points  
Average point value for multi-column issues

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Note: This spreadsheet includes the results of four Micro Teams, averaged overall, therefore overall averages differ from those reported in Ch 3 and Appendix Ch 5.2.		Theresa, Linda		Gail, Steve, Seth		Greg, Kerry, Nancy, Bill		MS, GN, NS, KR				
		MICRO TEAM 1		MICRO TEAM 2		MICRO TEAM 3		MICRO TEAM 4		ALL MICRO TEAMS		DIFF BETWEEN NOW & FUTURE
		MS		HS		MS		MS				
EDUCATIONAL DELIVERIES		NOW	FUT	NOW	FUT	NOW	FUT	NOW	FUT	NOW	FUT	LEAPS
INSTRUCTION		INSTRUCTION										
1	LEARNING THEME	2.50	4.00	2.50	4.00	1.00	4.00	0.00	0.00	2.00	4.00	2.00
2	EXHIBITIONS	2.00	5.00	2.00	3.00	2.00	5.00	0.00	0.00	2.00	4.33	2.33
3	DIFFERENCES	2.00	5.00	1.00	2.00	1.00	5.00	0.00	0.00	1.33	4.00	2.67
4	PERSONAL LEARNING	3.50	5.00	2.00	3.50	3.50	5.00	0.00	0.00	3.00	4.50	1.50
5	COLLABORATION	4.00	5.00	3.00	4.00	2.00	4.00	0.00	0.00	3.00	4.33	1.33
6	TEACHER TEAMS	2.00	5.00	2.00	4.00	2.00	4.00	0.00	0.00	2.00	4.33	2.33
7	OWNERSHIP	3.50	5.00	1.00	5.00	1.00	5.00	0.00	0.00	1.83	5.00	3.17
8	AWARENESS	2.00	5.00	1.00	5.00	1.00	5.00	0.00	0.00	1.33	5.00	3.67
9	TECHNOLOGY	4.00	5.00	3.00	5.00	3.00	5.00	0.00	0.00	3.33	5.00	1.67
10	DISPLAY	1.00	5.00	1.00	5.00	1.00	5.00	0.00	0.00	1.00	5.00	4.00
11	DELIVERY	4.00	5.00	2.00	5.00	2.00	5.00	0.00	0.00	2.67	5.00	2.33
12	INTEGRATION	2.00	4.00	2.00	5.00	2.00	4.00	0.00	0.00	2.00	4.33	2.33
13	LEARNING LOCATION	2.50	5.00	2.50	5.00	1.00	5.00	0.00	0.00	2.00	5.00	3.00
14	WHO TEACHES	3.00	4.00	2.00	4.00	1.00	4.00	0.00	0.00	2.00	4.00	2.00
15	MAKING LEARNING VISIBLE	2.00	5.00	2.00	5.00	2.00	5.00	0.00	0.00	2.00	5.00	3.00
CURRIC/ASSESSMENT		CURRIC/ASSESSMENT										
16	ASSESSMENTS	3.00	4.00	3.00	5.00	3.00	4.00	0.00	0.00	3.00	4.33	1.33
17	CURRIC FLEX	4.00	5.00	2.00	4.00	2.00	5.00	0.00	0.00	2.67	4.67	2.00
18	SOCIAL/ EMOTIOWL	2.50	5.00	2.50	4.00	2.50	5.00	0.00	0.00	2.50	4.67	2.17
19	21st CENT SKILLS	2.50	5.00	1.00	5.00	1.00	5.00	0.00	0.00	1.50	5.00	3.50
20	CURRICULUM	3.50	5.00	2.00	5.00	2.00	5.00	0.00	0.00	2.50	5.00	2.50
21	KNOW-EDGE	3.00	5.00	3.00	5.00	3.00	5.00	0.00	0.00	3.00	5.00	2.00
22	TEXT BOOKS	3.00	5.00	0.00	0.00	2.00	5.00	0.00	0.00	2.50	5.00	2.50
23	PACE + VEHICLES	3.00	4.00	1.00	4.00	1.00	4.00	0.00	0.00	1.67	4.00	2.33
24	GRADING	2.00	5.00	2.00	2.00	2.00	3.50	0.00	0.00	2.00	3.50	1.50
25	FREQUENCY	1.00	5.00	2.00	3.50	2.00	5.00	0.00	0.00	1.67	4.50	2.83
LEADERSHIP		LEADERSHIP										
26	DISTRIBUTION	3.00	5.00	3.00	3.00	1.00	5.00	0.00	0.00	2.33	4.33	2.00
27	SCHEDULING	2.50	5.00	1.00	5.00	1.00	5.00	0.00	0.00	1.50	5.00	3.50
PROF DEVELOPMENT		PROF DEVELOPMENT										
28	PROF DEVELOPMENT	1.00	5.00	2.00	5.00	2.00	5.00	0.00	0.00	1.67	5.00	3.33
29	COMMON PLANNING	3.50	5.00	2.00	3.50	3.50	3.50	0.00	0.00	3.00	4.00	1.00
RELATIONSHIP BUILDING		RELATIONSHIP BUILDING										
30	ADVISORS	2.00	5.00	2.00	5.00	2.00	5.00	0.00	0.00	2.00	5.00	3.00
31	KNOWING	3.50	5.00	2.00	5.00	3.50	5.00	0.00	0.00	3.00	5.00	2.00
CONNECTIONS		CONNECTIONS										
32	ADULTS	1.00	5.00	1.00	5.00	2.50	4.00	0.00	0.00	1.50	4.67	3.17
33	ARTICULATION	3.00	5.00	2.00	4.00	2.00	5.00	0.00	0.00	2.33	4.67	2.33
34	COMMUNITY	3.50	5.00	2.00	5.00	2.00	3.50	0.00	0.00	2.50	4.50	2.00
ELEMENTARY		ELEMENTARY										
	TECHNOLOGY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	GROUPING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	EXPLORATORY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MIDDLE YEARS		MIDDLE YEARS										
38	TRACKING	0.00	0.00	0.00	0.00	1.00	5.00	0.00	0.00	1.00	5.00	4.00
39	SCHOOL CONCEPT	2.00	3.50	0.00	0.00	2.00	3.50	0.00	0.00	1.33	2.33	1.00
HIGH SCHOOL		HIGH SCHOOL										
40	TRACKING	0.00	0.00	2.00	3.00	0.00	0.00	0.00	0.00	2.00	3.00	1.00
41	SCHOOL ORG	0.00	0.00	1.00	3.50	0.00	0.00	0.00	0.00	1.00	3.50	2.50
42	ELECTIVES	0.00	0.00	3.00	3.00	0.00	0.00	0.00	0.00	3.00	3.00	0.00
43	INTERDISCIPLINARY	0.00	0.00	1.00	5.00	0.00	0.00	0.00	0.00	1.00	5.00	4.00
44	APPLIED LEARNING	0.00	0.00	1.00	5.00	0.00	0.00	0.00	0.00	1.00	5.00	4.00
45	CLASS SIZE	0.00	0.00	1.00	2.50	0.00	0.00	0.00	0.00	1.00	2.50	1.50
46	TIME TABLE	0.00	0.00	3.50	5.00	0.00	0.00	0.00	0.00	3.50	5.00	1.50
		2.64	4.81	1.93	4.24	1.90	4.61	0.00	0.00	2.16	4.55	1.71

Note: This spreadsheet includes the results of four Micro Teams, averaged overall, therefore overall averages differ from those reported in Ch 3 and Appendix Ch 5.2.		Theresa, Linda		Gail, Steve, Seth		Greg, Kerry, Nancy, Bill		MS, GN, NS, KR				
		MICRO TEAM 1		MICRO TEAM 2		MICRO TEAM 3		MICRO TEAM 4		ALL MICRO TEAMS		DIFF BETWEEN NOW & FUTURE
		MS		HS		MS		MS				
FACILITIES		NOW	FUTURE	NOW	FUTURE	NOW	FUTURE	NOW	FUTURE	NOW	FUT	LEAPS
OVERALL PLANNING												
1	SIZE/ CAPACITY	4.00	5.00	1.00	5.00	1.00	5.00	0.00	0.00	2.00	5.00	3.00
2	FUTURE PROOFING	3.00	5.00	1.00	5.00	1.00	5.00	0.00	0.00	1.67	5.00	3.33
3	COLLABORATION	3.00	5.00	1.00	5.00	1.00	5.00	0.00	0.00	1.67	5.00	3.33
4	VISIBLE LEARNING	3.00	5.00	3.00	5.00	1.00	5.00	0.00	0.00	2.33	5.00	2.67
5	FLEXIBILITY	1.00	5.00	2.00	5.00	1.00	5.00	0.00	0.00	1.33	5.00	3.67
6	SOCIAL SETTING	1.00	5.00	1.00	5.00	1.00	5.00	0.00	0.00	1.00	5.00	4.00
7	EXPRESSION	4.00	5.00	2.00	5.00	1.00	5.00	0.00	0.00	2.33	5.00	2.67
8	SCHOOL ORGANIZATION	2.00	5.00	2.00	3.50	1.00	5.00	0.00	0.00	1.67	4.50	2.83
9	INTERDISCIPLINARY	2.00	5.00	2.00	4.00	1.00	5.00	0.00	0.00	1.67	4.67	3.00
10	MOVEMENT	2.00	5.00	2.00	4.00	1.00	5.00	0.00	0.00	1.67	4.67	3.00
11	AUTONOMY	1.00	0.00	1.00	2.00	1.00	2.00	0.00	0.00	1.00	2.00	1.00
12	COMMUNITY	3.00	5.00	2.00	5.00	2.00	3.00	0.00	0.00	2.33	4.33	2.00
13	MIXED USE	1.00	5.00	3.00	4.00	1.00	2.00	0.00	0.00	1.67	3.67	2.00
14	LEADERSHIP	2.00	5.00	2.00	5.00	2.00	5.00	0.00	0.00	2.00	5.00	3.00
15	PARENTS/ VOLUNTRS	5.00	0.00	1.00	5.00	1.00	5.00	0.00	0.00	2.33	5.00	2.67
SPECIFIC SPACES												
16	TRANSPARENCY	3.50	5.00	2.00	5.00	2.00	5.00	0.00	0.00	2.50	5.00	2.50
17	GROUPING	3.50	5.00	1.00	5.00	1.00	5.00	0.00	0.00	1.83	5.00	3.17
18	SMALL GROUPS	3.00	5.00	1.00	5.00	3.00	5.00	0.00	0.00	2.33	5.00	2.67
19	ARTS	2.00	5.00	2.00	3.50	2.00	5.00	0.00	0.00	2.00	4.50	2.50
20	SPECIAL ED	2.00	0.00	2.00	3.50	3.50	5.00	0.00	0.00	2.50	4.25	1.75
21	PE/ ATHLETICS	1.00	5.00	2.00	5.00	1.00	5.00	0.00	0.00	1.33	5.00	3.67
22	TECH ED	4.00	5.00	2.50	5.00	2.50	4.00	0.00	0.00	3.00	4.67	1.67
23	WET LABS	1.00	5.00	1.00	5.00	1.00	5.00	0.00	0.00	1.00	5.00	4.00
24	CLASSROOM SIZES	4.00	5.00	1.00	5.00	2.50	5.00	0.00	0.00	2.50	5.00	2.50
25	DRY LABS	2.00	3.50	1.00	3.50	1.00	5.00	0.00	0.00	1.33	4.00	2.67
26	MEDIA CTR	2.00	5.00	2.00	4.00	2.00	4.00	0.00	0.00	2.00	4.33	2.33
27	ASSEMBLY	4.00	5.00	4.00	4.00	1.00	5.00	0.00	0.00	3.00	4.67	1.67
28	TEACHER PLANNING	2.00	5.00	1.00	5.00	1.00	5.00	0.00	0.00	1.33	5.00	3.67
29	CONNECTIONS	2.00	5.00	2.00	3.00	1.00	5.00	0.00	0.00	1.67	4.33	2.67
FOOD SERVICE												
30	FOOD CHOICES + PREP	3.00	5.00	2.00	5.00	2.00	4.00	0.00	0.00	2.33	4.67	2.33
SUSTAINABLE												
31	ENVIRON IMPACT	2.00	5.00	1.00	5.00	1.00	5.00	0.00	0.00	1.33	5.00	3.67
FURN + EQUIP												
32	TECH INTEGRATION	4.00	5.00	3.00	5.00	3.00	5.00	0.00	0.00	3.33	5.00	1.67
33	STUDENT FURNITURE	0.00	5.00	1.00	4.00	1.00	5.00	0.00	0.00	0.67	4.67	4.00
34	CABINERY	3.00	5.00	1.00	5.00	2.00	5.00	0.00	0.00	2.00	5.00	3.00
35	COMPUTER RATIO	2.00	0.00	4.00	5.00	1.00	5.00	0.00	0.00	2.33	5.00	2.67
		1.59	4.71	1.61	4.28	1.56	4.41	1.90	3.91	1.94	4.72	2.78