



AGENDA

The second Futures Team workshop was held on 5th May 2011.

Notes of all activities follow:

- Larry Rosenstock video on High Tech High
- Learning from Workshop #1
- Project-Based Learning
- Lunch Theater: Project-Based Learning
- School Organizational Structure
- Interdisciplinary Learning
- Classroom Grouping Concepts

LARRY ROSENSTOCK HIGH TECH HIGH VIDEO

Futures Team members watched the Mobile Learning Institute video of Larry Rosenstock talking about project-based learning at High Tech High. Reactions to the video were as follows. Bold items were highlighted as being very important.

TABLE TEAM 1

- Opportunity for students to put more of 'themselves' into work/projects
- **Students have chance to wear different hats before graduating**
- Open architecture/less confining
- Showcases student work (like a "giant fridge")
- No tracking/clustering of students

TABLE TEAM 2

- **Combined Math and Art in one course**
- Purpose and value to project
- Community buy-in! (PR needed)
- The school does everything to get the kid to college
- OK to fail!
- Students learn through projects



Futures Team Workshop 2





- Arts have great recognition

TABLE TEAM 3

- **We need more 1:1 student-teacher relationships**
- More hands-on, project based
- Less direct instruction
- Space
 - Exciting to display student work
 - Able to see what everyone else was doing - sharing
- Integrated content
- More student independence
- Real-world connections

TABLE TEAM 4

- Project based learning
- Mixed levels
- Mixing science, technology and arts
- Open layout and windows
- Displaying student work
- Seems unstructured
- **Thinking out of the box**
- How do these students work after school? (Do these skills transfer?)
- Community buy-in
- Connecting to the real world
- Students need to learn to work independently + time management
- Need for professional development/background in subject area

TABLE TEAM 6

- Different – cosmetics/aesthetics, factory/industrial, start-up
- Robots involved with art/math, turning science into art
- Shared bathrooms? What?
- Model adult behavior, practice approach of 'real world'
- Give kids skills/responsibilities, kids will rise
- **Kids were passionate/proud about learning and doing**
- Applied concepts – huge integration of kids, no cliques?
- Not just Eng/Math/Science
- It was applied, not lecture! (not boring)

TABLE TEAM 7

- Open space
- Fusion of science/art
- **Integration of diverse populations**
- Display of work
- Freedom of student to explore interests

TABLE TEAM 8

- Student work is displayed just like art work
- It shows the influential background of the Director: it has character and perspective
- Open classroom concept: you could see from one place to another
- **If you treat students with respect, students will respect their learning environment**
- Interdisciplinary connections with all subjects

TABLE TEAM 9

- Openness
- Less need for books
- I-Pads
- Project based
- Classroom showcase
- Trust students
- **Real life**

WHOLE GROUP DISCUSSION

- Innovative buildings demand professional staff development
- Like openness
- High Tech High is like Mass College of Art studio learning
- Learning process allows a degree of distraction
- We eliminated vocational schools in HS in Massachusetts
- We cut out of project-based learning
 - How do we bring it back?
 - Need P-BL
- Okay if kids not sitting in desks in rows



- In future, best teachers will be doing this kind of work
 - We need to attract them
- Need to not repeat the vocational mistakes

LEARNING FROM WORKSHOP # 1

Futures Team members who participated in the first workshop shared essential ideas with those who did not attend. Bold items were highlighted as being very important.

TABLE TEAM 1

- 21st century skills for jobs that have not been created yet
- Media Center – the focus point for social, academic uses
- **How classrooms will look – out of the box designs**
- We do not want desks in rows and chairs connected to desks
- Interdisciplinary learning
 - Both classes and projects
 - Not broken up by departments
- Getting the community involved
 - Businesses helping with projects
 - Funding – public relations – school substance
- Better technology we can use
- Professional development for teachers

TABLE TEAM 2

- Multiple Intelligences
 - How can everyone get something out of school? There isn't only one way
 - How do you do that in a classroom?
 - Letting students decide on projects
 - Flexibility
- **New Furniture Concepts - Mobility**
 - **Bean bags**
 - **Standing desks**
 - **Rocking desks/chairs**
- Library – interesting, comfortable, accessible
 - Digital research, access

TABLE TEAM 3

- Learn by doing
- **We questioned structure of departments**
- 21st century skills

TABLE TEAM 4

- Multiple intelligences
- Bringing the real world in project based learning
- 21st Century skills/technology
- **New furniture – comfortable and moveable is key!**
- How to tap student passions
- **Color! Student work up in the hallways**

TABLE TEAM 5

- Update education model and calendar
- **Update building layout and use of space**
- Bring in modern teaching and school organization
- Teacher is a guide
- Different types of furniture and layout (avoid traditional style)

TABLE TEAM 6

- **Learn best by doing and then teaching others**
- 21st Century Learning
 - Multi-intelligences
 - Global audiences
 - Collaboration/critical thinking/communication/creativity
- Interdisciplinary learning
 - Collaborate across subjects

TABLE TEAM 7

- **Everyone learns differently**
- Building
- Small learning communities
- Get to know each other
- Work as a team





TABLE TEAM 7

- Project based learning
- **Use of technology**
- **Interdisciplinary projects**
- **Flexible school design (supports possible change)**

WHOLE GROUP DISCUSSION

- We need to be able to move out of our comfort zone to improve learning

PROJECT-BASED LEARNING

The Futures Team explored concepts of project-based learning. The Edutopia video on Eeva Reeder's 10th grade geometry class project to design a high school for the year 2050 was viewed and then discussed. Participants then responded to the following prompts, and developed project concepts for Wilmington High School.

The discussion prompts were:

Develop a project.

1. **Identify the curriculum content you want students to learn**
2. **Seek related content/subject areas. One, two, or more?**
Bonus for interdisciplinary!
3. **Create a project idea. The project should be sufficiently complex to not have a single solution**

EXAMPLE: Design a marketing strategy to market independent student summer businesses

4. **Describe the skills/prerequisites students must possess to complete the project successfully**

5. How long does it last?

How prominent is the project within the context of the curriculum?

EXAMPLE 1: It's a treat for students to break from our regular schedule. We do a week long project at the end of the year.

EXAMPLE 2: Two projects:

The first is a single, highly complex, year-long project that serves to integrate everything we cover in the core curricula (English, Math, Social Studies, Science).

The second is a series of smaller projects designed to help students complete the larger project. Students are always working on a project of one kind or another.

6. Does it involve community responsibility? Community experts? How?

7. When could this get started? Can it be a Pilot Project?

Eeva Reeder's 10th Grade Geometry Class

Discussion following the video raised the following points:

- All kids were excited
- Learning not just quizzes and tests
- It is worth all the prep
- Community participation: the architects had been working with the school for eight years
- Have to apply what you learn
- Project-based learning is rewarding and memorable
- Group dynamics – students have to work well as a group
 - Have to learn to work as a group
- Work tables are needed, not small student desks
- Technology is needed
- Standards are set for projects
 - Public speaking is a part of the project
- This takes place in the last six weeks of school year



5.2 Futures Team Workshop 2



- Nice to have project goal oriented not grade oriented
- Lot about working together
- Teacher attitude important
- Should start with hands on in MS

Project Concepts

MARKETING CAMPAIGN FOR PHARMACEUTICALS

TABLE TEAM 1

Concept

- Chemistry - Molecular Structure (Marketing, Graphic Design, Health)
- Teams from Mrs. Marshall, Mrs. Anderson, Ms. Fidler's classes compete to create a marketing campaign for a pharmaceutical project
 - Must be **ACCURATE** in molecular representation, engaging design, strong marketing, concept skills, etc., math statistics
- Research into molecular structure(s)
- Legal ramifications of design/marketing of medicine
- Creative/original approach to campaign
- Ethics for campaign
- Approximately 4 weeks
 - Worked on in 3 separate classrooms collaborating via Google Documents, etc.
- Ends with fair/completion for teams
- Fall 2011****
 - Larger scale, Sept, 2012 (would require rewriting prog. of studios)

STUDENT WRITTEN, PRODUCED, FILMED MOVIE

TABLE TEAM 2

- Curriculum Content
 - Writing – Story structures, dialog
 - Design – Sets, props, craftsmanship
 - Performance – acting effectively
 - Editing – engineering

- Content areas: English, Performing, Arts, Act, Visual Arts + any applicable topic (e.g. history)
- Structure:
 - Write/develop the script (plot/characters, etc.)
 - Casting/acting
 - Building needed materials (design) sets, costumes, etc.
 - Project management
 - Filming
 - Editing
 - Showing
- Skills (writing, marketing, acting, etc., see above, teamwork)
- Whole year – divided into multiple tasks – each group works on the project – one quarter
- Community invite area writers, actors, directors – Film Festival – community invited, judges
- Next year?

WILMINGTON COMMUNITY E-JOURNAL

TABLE TEAM 3

- Writing (+ more!)
- English, Business, Visual Arts, Social Studies (CE), Math, Technology Integration, Foreign Language
- Student-run online magazine
- Social, communication, outreach. . .
- Ongoing – 1-2 months, regular updates
- Local papers – local business, local stores
- September 2012 – yes

4th OF JULY

TABLE TEAM 4

- Have students plan and design 4th of July event
 - Carnival
 - Fireworks
 - Family Day
- Requires skills in electives collaboration
 - Geometry
 - Business



5.2 Futures Team Workshop 2



- Graphic Design
- Marketing
- Science
- Managing \$\$
- Full year – junior year (August-June)
- Community
 - Fire
 - Police
 - Gov.
 - Businesses
- Interdisciplinary opportunities
 - Physics
 - Math, Art, Literature, History
 - Problem solving (math) and physics
 - Schedule of physical space
 - Planning time and space
- This can be done ASAP

CAT COUNTRY CLUB

TABLE TEAM 5

- Disciplines involved:
 - English
 - Graphic Design
 - Tech. Ed.
 - Business
 - History
 - Science
 - Art
 - Math
 - Phys. Ed.
- Final year project
- Each group designs 1 hole
- 9 hole mini golf course is the result
- Community involvement/fundraising
- Lasts school year
- Launch in September 2012
- Update curriculum

- Vary assessments
- Use rubrics not always Q + T for grades
- Measure student achievement using rubrics and multiple intelligences
- Launch – can/will with new building
 - Pockets happening now
 - Need different schedule with interdisciplinary time, ex. 1 lunchroom mixed depts. eating together
 - Common planning time with prep. time for department collaboration

COSTA RICA TRIP (FOR CREDIT)

TABLE TEAM 6

- Trip is end point
 - Biology
 - Ecology
 - English
 - Spanish
 - History
 - Geography
 - Math (conversion)
- Clean H₂O Initiative
 - Biology
 - Chemistry
 - Physics
 - Aquaculture
 - English/World language
 - PSA
 - Math (conversion)
- SS – Focus on country and region
 - Wilmington H₂O
 - Rotarians
 - History
- Infectious Diseases
 - Anatomy
 - Biology
 - Aquaculture
 - Chemistry



- Bio-Tech
- Physics
- World Languages
- English (proposal, brochure)
- Math (epidemic rates, stats)
- Evolution
- Ecology

DESIGN A COMFY CHAIR

TABLE TEAM 7

- Tech education
- Skype re: foreign country
- Art and materials
- Advertising
- Math
- Physics
- English – proposal
- Community

DESIGN + BUILD A SOLAR CAR

TABLE TEAM 8

- Math – Geometry
- Science
 - Physics – energy + Laws of Motion
 - Biology
 - Sustainability + Environmental Science
 - Chemistry – batteries, biodiesel
 - Art – car design and look
 - ELA – brochures, proposal
- Marketing/Business – brochures
- Autocad
- Tech. Ed. – Structural relationships
- Shop – metal fab., welding, mech.
- Semester-long project
- Social Studies – community responsibility
 - Science community
 - University help
- Competition in school or within other schools, tech or other

Deploy the solar car project

- Physical space working and storage
- Build additional space (hire architects)
- Find alternative site(s)
- Machinery/tools
- Seeking donations/grants
- Public awareness/local businesses/increase taxes/fund raisers
- Materials
- Financial resources – proceeds from Film Festival and e-magazine

BUILD A COMMUNITY YOUTH CENTER

TABLE TEAM 9

- Whole year project
- Teams of six students
- Interdisciplinary
- Secure space
- Business plan
- Zoning permits
- Planning Board
- Architects
- Town Manager
- Present to local businesses
- Go to Selectmen for approval
- Design space
- Purchase equipment
- Skills
- Teamwork
- Critical and creativity
- Problem solving

Discussion on Project-Based Learning

- Be careful not to confuse a project with an activity
 - A project asks essential questions, has no single answer, is open-ended, deep, and rich
 - An activity may look the same, but lacks the rigor, and often does not ask any questions



- Logistics
 - How to deploy
 - Flow chart?
 - Is 'pass it on' really interdisciplinary?

LUNCH THEATER: PROJECT-BASED LEARNING

An Edutopia video on interdisciplinary learning was viewed. It prompted the following comments:

- How do we get teacher buy-in
 - Visit other places
- Team teaching
 - Why not in HS?
 - We are risk averse
 - We hold on to content turf, and do not share well
 - New state law HS teacher evaluations based on performance
 - Fear: P-BL will not deliver content
- Research shows that P-BL increases test scores
 - WHS staff not aware
- Kids
 - Experience lasts and you know it
 - Chemistry – demonstration important
- Does P-BL eliminate tracking?
- Projects can bring passion
- What about honors class?
- Kids separated by tracks are connected in sports
- The Hope Index measures student belief in themselves
- How do colleges evaluate student if in different programs?
- Tracking is like train tracks – predestined
- Portfolio
- The TED video on Randy Nelson, Pixar University, is worth watching

SCHOOL ORGANIZATIONAL STRUCTURE

Several table teams identified future school organizational concepts for Wilmington High School. They shared their concepts. The futures Team then voted individually for the one concept they thought was most appropriate for the future WHS. The concepts are:

Structure Concepts

JUNIOR/SENIOR PROJECT

TABLE TEAM 1

- Jr/Sr Project
 - Advisor (school/community)
 - Give back to community
 - Choose interest area
 - Underclass = breadth
 - Sr = depth
 - Period v. entire year
 - Take more electives that tie-in with core
 - Change graduation requirements?
 - Limits exposure of courses?
 - MCAS?

NO HOUSES

TABLE TEAM 1

- NO HOUSES (already in middle school)
- Lunch is not a suitable time to see everyone
- Homeroom?
 - Lock out for you – not alone
 - Need time for connections
 - Guidance does scheduling – not full service
 - LA + College – too large case load
- More outdoor space!
- Class outside?
- Discipline/distraction?
- Performance Art Center to be utilized by all

5.2 Futures Team Workshop 2



- Lights/sound
- Assembly space
- Art at funding source
- Heat
- Heat and A/C
- Central printers/copies for student and teachers
 - When one breaks?! Ahhh!
- Centralized, useable library
- Lockers are too far from class (circle idea), more paths, cubbies
- Café: wraps, study/lounge space – kids go to library, not lunch
- Kids need time away from teachers – ‘me time’
- Central spot for teacher lunches

STUDENTS RESPONSIBLE FOR THEIR LEARNING

TABLE TEAM 2

- Goal
 - Students to wear as many hats before graduating
 - Students put in charge of their ‘tracking’/ed future
- Teacher = facilitator/advisor
- Less emphasis on dept/more on interdisciplinary learning
- Grade/credit by Portfolio/Review
- Board rather than by individual teacher/course

SELF-DIRECTED/SENIOR PROJECT

TABLE TEAM 3

- Internships during Q4 for all seniors
- Local business and industry involved throughout school year, presenting and working with students to help with choices for internship
- Teacher redeployed to support/assess development of final presentation about internship experience, possibly redeployed to work with other classes on interdisciplinary projects
- Student requirement – final presentation to incorporate multiple content areas

SMALL LEARNING COMMUNITIES (CAREER INTEREST BASED)

TABLE TEAM 4

- Students would choose a career-based area of study
- Trial specific areas in Grade 9 in area of support (i.e. communication, medical, engineering, etc.)
- Projects designed to meet content

Pros

- Increased motivation
- Promotes creativity
- Stronger support by peers
- Project related, career readiness
- Working with professionals
- Making connections
- Real-life application
- Increased responsibility ownership
- Improved organization/presentation skills
- Time management
- Re-deployment of teachers

Cons

- May not be enough class time
- Inflexible – easy change???
- Limits socialization
- Scheduling may be limiting
- Loss of collaboration
- Peer interaction reduced
- Transportation
- Fear of change
- Logistics (music, athletics, work)

Straw Vote

Futures Team members reviewed the concepts, and voted for the one they felt was most appropriate for the future Wilmington High School.

The votes were:

JUNIOR/SENIOR PROJECT, TABLE TEAM 1

- 6 votes

NO HOUSES, TABLE TEAM 1

- 0 votes

STUDENTS RESPONSIBLE FOR THEIR LEARNING, TABLE TEAM 2

- 5 votes

5.2 Futures Team Workshop 2



SELF-DIRECTED/SENIOR PROJECT, TABLE TEAM 3

- 25 votes

SMALL LEARNING COMMUNITIES (CAREER INTEREST BASED, TABLE TEAM 4

- 0 votes

INTERDISCIPLINARY OPTIONS

Futures Team members were asked to identify the impediments to interdisciplinary teaching and learning. Table Teams reported their findings as follows:

Findings

TABLE TEAM 1

- Impediments
 - The schedule
 - Physical building
 - System of cred/grad. reg. for students
- Facilitate Int. Learning at WHS
 - Common planning/instruction time
 - Int. CIT time
 - Focus on interdisciplinary
 - Involve students in CIT time
 - Allow students to earn multi-course credit for courses/projects
- When/How?
 - On small scale – now ind. teachers or as pairs/small groups

TABLE TEAM 2

- Impediments
 - Coordination
 - Department relation
 - Continuity (no passing it on, but working with troupes when tasks change – providing feedback)

- 'Client relationship' – back and forth with all facets of the project for a unified vision
- How?
- The schedule - meeting during school hours
- Coordinator
- How do we get multiple disciplines involved?
- Should students be limited to just one part of it?
- When do classes meet?
- How do you decide who does what?
- Making deadlines
- Dedication to final product
- Project Manager – authority to keep project moving/on task?
- Space
- Schedule this during period #7 (end of the day)

TABLE TEAM 3

- Interdisciplinary
- Schedule
- Lack of flexible space(s)
- Limited in-class network/computer access
- Athletics
- Community (some)
- Department structure
- Bussing
- Facilitating interdisciplinary learning
- Flex scheduling
- Budget increase \$\$
- Flexible space
- Staff special development
- Increase network access
- Available technology increase

TABLE TEAM 4

- Impediments.
 - Transportation
 - Materials (i.e., software, equipment, space)
 - Schedule

5.2 Futures Team Workshop 2



- Teacher expertise
- Planning time
- Community involvement
- Facilitate
 - Professional development – tweak
 - Community involvements – just ask
 - Technology
 - Materials
 - Money
 - Public relations
- If Nothing Changes
 - Students take ownership of school – decorative/aesthetics
 - Take steps toward interdisciplinary learning
 - Make use of new technology
- Up to Admin and Curriculum Team Leaders
- Get all 'plug-ins' aligned
- Kids, too
- "There is no alternative"
- Cannot do in ½ day/month; we need more professional development time
- If we were to change all the ways we teach all at once, there would be chaos
- We need Pilot projects
- Grow slowly
- Fear – we need to need to reduce fear of failure

TABLE TEAM 5

- Flexible work schedule
- Common time slot for projects throughout school
- Faculty buy-in
- Explore teacher interests/compensation – grants
- Professional development shows benefits
- Common planning time

TABLE TEAM 6

- Willingness to take chances
- Schedule
- Space
- Fear of loss of control
- Student-teacher trust
- Improve risk taking
- Building layout
- Lack of flexibility
- Athletics (fake grass)

Discussion

- We need to start conversations

CLASSROOM GROUPING CONCEPTS

The Futures Team explored concepts of planning for small learning communities. Participants then responded to the following prompts, and developed project concepts for Wilmington High School. A vote was then taken to determine the most favored concept.

The discussion prompts were:

Create a Small Learning Community:

1. What/who will be in it?
2. What spaces does it need?
3. Is it thematic? Generic?
4. How many students will it hold?
5. How does it support Project-based learning?
6. How does it support interdisciplinary learning
7. How does it support applied/hands-on learning?



8. What technology does it need?

9. What is it next to?

Planning Concepts

TABLE TEAM 1

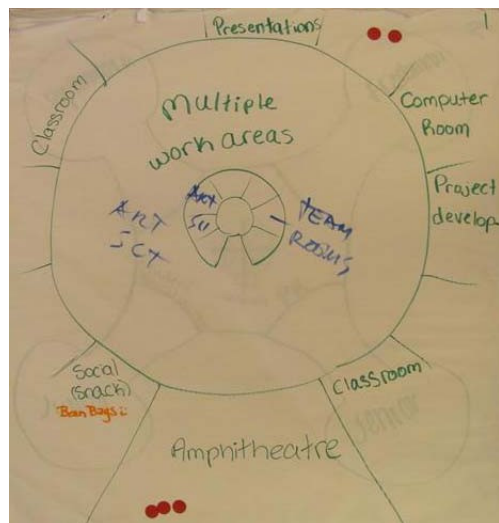


TABLE TEAM 2

Responses to the questions:

#1 and #2 Small Learning General Comments

- Wet Labs needed for
 - Science
 - Art
 - Tech Ed
- Food desired
- Quiet/Study
- Break-out space (project)
- Presentation 50-70

- Loud space (music and present)
- Conference area
- Gym
- Auditorium
- Cafeteria
- Media Center (connection of whole)

#3 Generic Learning Comments

#4 How many students?

- Freshman Academy?
- Magic of 150
- Freshmen need exposure to larger student body
- How do grades map onto grouping

#5 + 6 Flexibility

- Team teaching
- Non-departmental

#7 Applied learning

- Supported by Tech/Lab area

#8 WirelessProjectors

- Interactive boards
- Smart phones/cell phones
- Staff training – IT
- Cameras

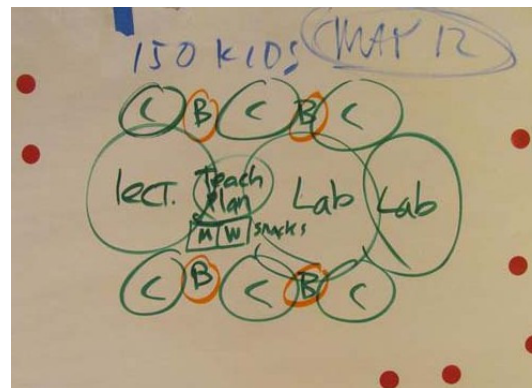
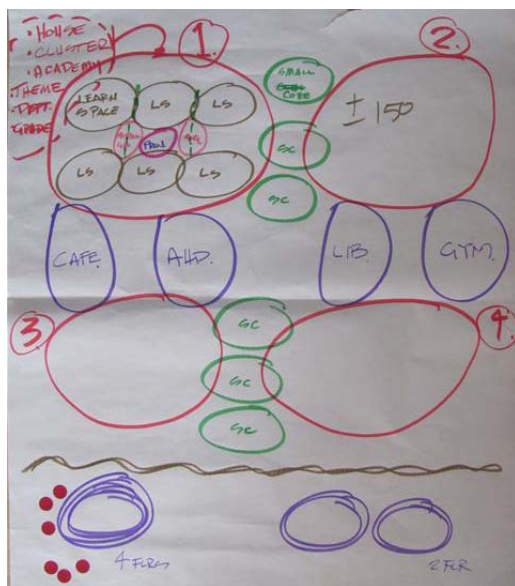




TABLE TEAM 6



Straw Vote

Futures Team members reviewed the concepts, and voted for the one they felt was most appropriate for the future Wilmington High School.

The votes were:

TABLE TEAM 1

- 5 votes

TABLE TEAM 2

- 7 votes

TABLE TEAM 3

- 16 votes

TABLE TEAM 4

- 5 votes

TABLE TEAM 5

- 1 vote

TABLE TEAM 6

- 6 votes