



*"Effort Creates Ability"*

**THE MARINE SCIENCE MAGNET HIGH SCHOOL  
OF SOUTHEASTERN CONNECTICUT  
GROTON, CONNECTICUT**



## EXECUTIVE SUMMARY

The mission of the Marine Science High School of Southeastern Connecticut (MSMHS) is to prepare students for marine related employment and/or higher education by addressing a wide range of marine related topics and disciplines with a challenging, experiential curriculum responsive to the diverse interests of a broad spectrum of students. The school was founded and operates within a series of on-going partnerships among educators, industry and community resources. The school provides direct and hands-on access to regional experts in marine sciences, aquaculture and related technologies and engages learners in the process of innovation, adaptability and continuous improvement.

The school is an inter-district magnet school operated by LEARN, a Regional Educational Service Center, and opened up its doors to students on September of 2011. The school selects students in Grades 9-12 through a lottery-based system available to 26 local and regionalized school districts. The school is the product of a dynamic process that involved nearly 10 years of planning with a variety of stakeholders around the development of core values and curriculum; the school is a physical manifestation of these efforts and has been designed to foster critical thinking, problem solving and the development of transferable employment skills.

### PROJECT DATA

Site Area: 7 acres

Contract Date: Spring 2005

Total Gross Building Area: 64,470 sf

Start of Construction: April 2010

Site Development Costs: \$2.77 million

Completion: August, 2011

Building Costs: \$19.042 million

Cost/Square Foot: \$419

Furnishing Costs: \$.475 million

Cost/Student: \$108,000

Technology Costs: \$.875 million

Space/Student: 258 SF

Total Project Costs: \$27 million

Sustainability Rating: None

# **PROJECT PLANNING AND STAKEHOLDER ENGAGEMENT**

## **BACKGROUND AND GOALS**

A mission statement was developed by the MSMHS Governance Committee in 2005. In 2007, this statement was reviewed and utilizing materials from the University of Pittsburgh's Institute for Learning (Principles of Learning) faculty and staff members developed the culture and climate statement that became an integral component of Core Values. It was agreed that the connection with students would be the fundamental platform for student success, and that the environment and setting in which students learn must be healthy, positive and nurturing. The culture and climate statement reads: ***"MSMHS is a safe, respectful and nurturing environment where our professional learning community is committed to 21st century instruction that promotes effort and academic rigor by celebrating diversity and believing with the collaboration of stakeholders that all students will succeed."***

During the planning staff agreed to focus on three of the Principles of Learning: Organizing for Effort, Recognition of Accomplishment and Accountable Talk. The research-based practices from the Institute for Learning and Richard DuFour's work with Professional Learning Communities (PLCs) guided initial efforts (and currently provide reference for monitoring and assessment of work and results). School-wide rubrics were developed with the full input of all of faculty and staff to incorporate 21st century learning expectations addressing academic, social, and civic competencies. The original planning committee of the school embraced the 21st century learning expectations as a cornerstone of MSMHS, and was fully cognizant of the changes in the details of the New England Association of Schools and College (NEASC) Standards long before the doors of the school opened on September 1, 2011.

### **Learning objectives for the school were:**

- Students, in cooperation with their teaching staff and families, will
  - o Demonstrate a sense of self as a learner
  - o Demonstrate a sense of responsibility to self and others
  - o Demonstrate effective functioning, individually and as a member of a group
  - o Demonstrate the ability to think critically, solve problems, reason, and question
  - o Use language to communicate, convey, and interpret meaning
- The Marine Science High School will encourage the learning of environmental ocean sciences, including wise natural resource management, an appreciation of coastal waters for commerce, recreation, and food production.
- The Marine Science High School will provide supervised occupational experiences in order to build a basis for a growing experienced future marine work force.
- The school will provide continuous educational opportunities for families to participate in the education of their children.
- The school's program will engage the families and students in regular multicultural activities to promote awareness, acceptance, and appreciation of diversity.



**It was determined that the building would need to respond by being:**

**Engaging.** There was an expectation that this hands-on school would need to become a more active part of the educational experience. These high school students would spend half their time out doing field work. The design team was challenged to create an environment that would take students seamlessly from the field to the classroom and provide an equally engaging and dynamic environment and experience for this age group. This school needed to become a place where all students could learn.

**Agile and Dynamic.** The building would be flexible-suggesting patterns of use and be responsive to administrator, teacher and especially student initiative in developing new and unplanned uses. Spaces needed to support the dynamic flow of a variety of activities, to seamlessly accommodate and support a range of technologies and interactions. The curriculum defines technology as “any (appropriate) tool that can be used in the learning process.” Students and teachers would be encouraged to see technology in everything from rubber boots and clamming rakes, to state-of-the-art bridge simulators and aquaculture labs. The building was planned to be another tool in the process of learning and collaboration.

**Mission responsive.** Design of the school needs to prepare students for next steps in their lives and evoke or make familiar the environments they will encounter next - - whether these settings are based on research, industry, open corporate office or higher education.

## **EARLY PLANNING AND DESIGN**

In the early stages of design, numerous sites were studied through the City of New London and Town of Groton. Earliest locations sited the school in order to have direct fresh and saltwater access. Each of these 4 early sites was eventually ruled out for a variety of reasons - including flood plain issues.

The owner worked with stakeholders to identify desirable sites and the architect undertook research as to feasibility.



**5 SITES WERE STUDIED - 2 WITHIN THE CITY OF NEW LONDON AND 3 WITHIN THE TOWN OF GROTON. THE FINAL SITE - ON SHENECOSETT ROAD IS HIGHLIGHTED IN YELLOW.**



## COMMUNITY ENGAGEMENT PROCESS

School was the result of a 10-year effort by regional educational service provider to bring together surrounding member districts, parents, and regional educational institutions in development of a new high school to prepare students for higher education and/or marine related employment. The school's building committee included a diverse group of educational partners. The committee provided expertise in curriculum development and ongoing evaluation on how building responded to educational objectives.

The following institutions had varying levels of involvement in the regional planning effort

- Ledyard Agri-Science program, Ledyard Public Schools
- Waterford Public Schools
- Stonington Public Schools
- Connecticut Maritime Coalition
- Ocean Technology Foundation
- The Connecticut Marine Trades Association Connecticut Marine Industry Cluster
- UCONN at Avery Point
- Mystic Seaport
- Project Oceanology
- Mystic Aquarium







**AREA CONTEXT** - THE SCHOOL IS CLOSELY LINKED TO NEARBY STAKEHOLDERS, EDUCATIONAL INSTITUTIONS AND MARINE-RELATED INDUSTRIES.



Current, on-going partnerships include Johnson and Wales University, The University of St. Joseph, Roger Williams University, UCONN Avery Point, The United States Coast Guard Academy, Grossman's Seafood (distribution of raised aquatic animals), New England Science and Sailing (sailing team and summer program), Mystic Aquarium, Mystic Seaport, the Mystic Arts Center, Department of Energy and Environmental Protection, Project Oceanology and the New London Water Authority.

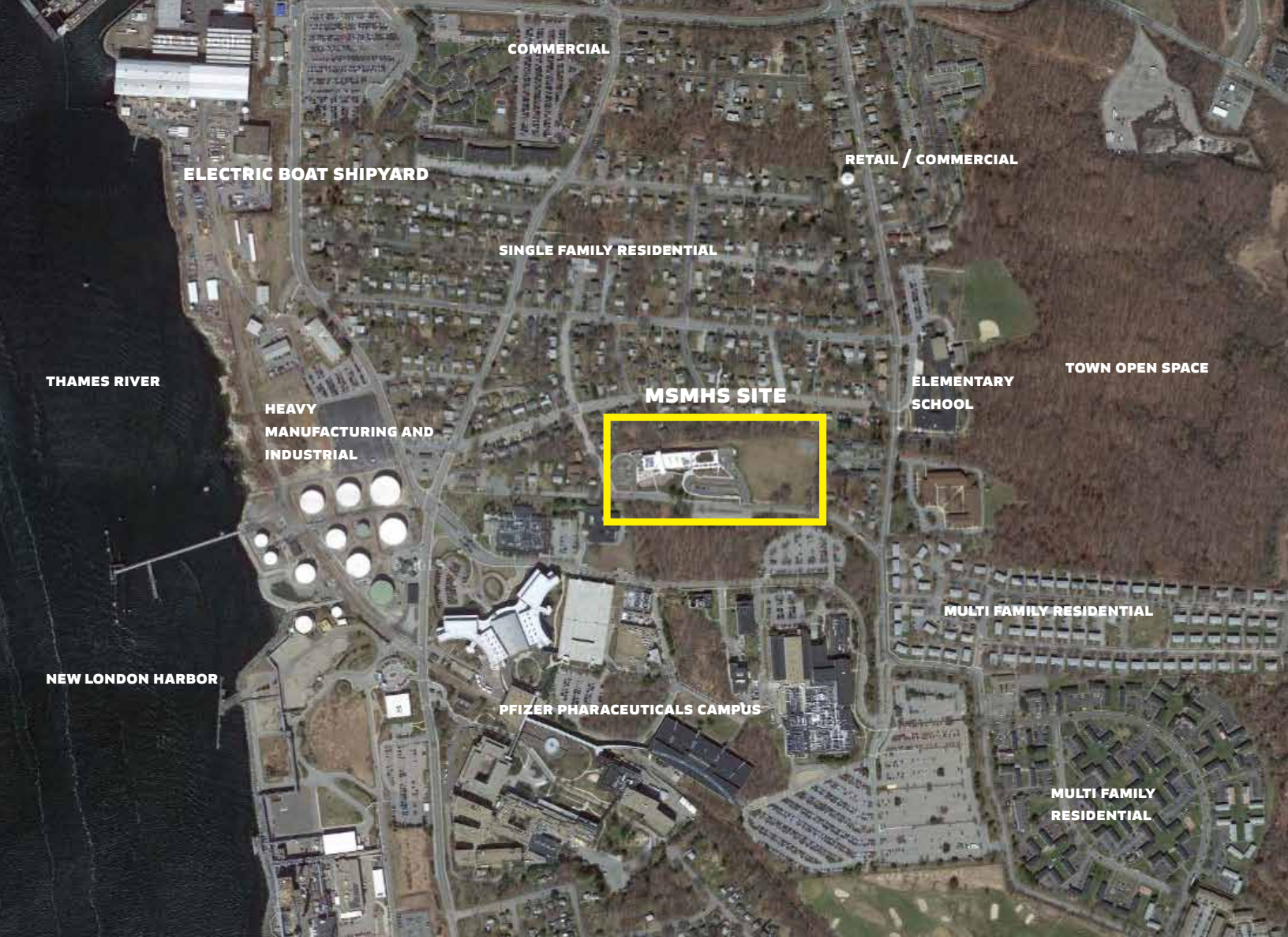
**EDUCATIONAL AND  
PHYSICAL ENVIRONMENT**





MAIN ENTRY AT NIGHT. CONCRETE WALL WITH "AQUA BUBBLES" SCREENS COVERED PARKING FROM VIEW.





**ABOVE: SITE CONTEXT** - SCHOOL IS SURROUNDING BY SINGLE AND MULTI FAMILY DWELLINGS, CAMPUS FOR MAJOR BIOMEDICAL CORPORATION AND HEAVY MANUFACTURING AND INDUSTRIAL COMPANIES.

**BELOW: IMMEDIATE CONTEXT** - LIMITED PARKING/PERVIOUS MATERIAL ON SITE DUE TO PARKING UNDER THE BUILDING. GREEN ROOF VISIBLE TO RIGHT.







VIEW OF MAIN ENTRANCE AND CLASSROOM WING FROM UPPER LOT/BUS DROP OFF



**THE SCHOOL SITS ON THE LONG AND NARROW SITE OF VACANT 1920'S ELEMENTARY SCHOOL, SITS BETWEEN SINGLE-FAMILY RESIDENTIAL AND RESEARCH/MANUFACTURING FACILITY – FORMING A RESPECTFUL AND TRANSITIONAL ELEMENT BETWEEN THE TWO.**



The original school was demolished but ball field and playground were preserved at request of neighbors. Building responds to marine theme and context of a working waterfront located ¼ mile away. Influences are seen in exterior color and cladding, design of prominent overhead doors and Entrance Bridge.



THE DESIGN RESPONSE WAS HEAVILY INFLUENCED BY THE CONTEXT OF THE LOCAL WORKING WATERFRONT, INCLUDING STRUCTURES AT THE GENERAL DYNAMIC'S ELECTRIC BOAT SHIPYARD





VIEW MAIN ENTRANCE AND WETLANDS FROM PARENT/VISITOR DROP OFF. ENTRANCE TO SUBSTRUCTURE PARKING TO LEFT

## SITE PLAN / SITE FEATURES



- 1 bus unloading
- 2 parent / visitor parking
- 3 geothermal wells under ballfield
- 4 community playground
- 5 service
- 6 rain gardens / wetlands
- 7 under building parking
- 8 outdoor project area

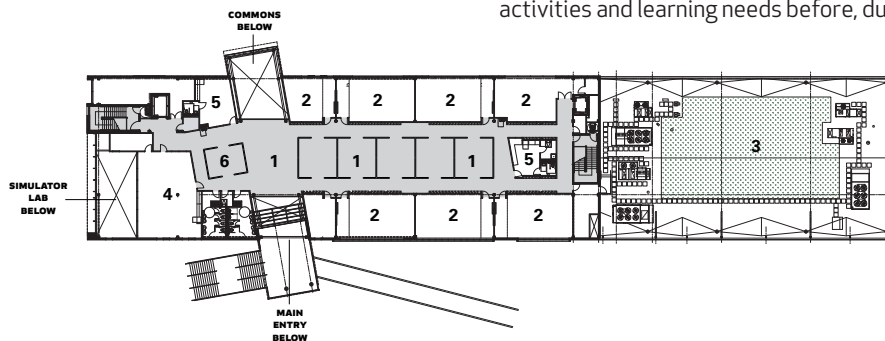
100' 



ACTIVE BEFORE, DURING AND AFTER THE SCHOOL DAY, THIS SPACE IS USED BY STUDENTS AND TEACHERS FOR FORMAL AND INFORMAL INSTRUCTION. BALCONIES OVERLOOK THE COMMONS AND MAIN ENTRANCE.

## HOME BASE IS THE SOCIAL AND EDUCATIONAL HEART OF THE SCHOOL.

The school is designed to support a wet day / dry day schedule. Students split their time between classroom based activity (dry) and hands-on projects (wet) in the labs or with one of the schools many marine-industry partners (including off-shore oyster beds). The student Home Base provides an agile, flexible environment that is user adapted to a variety of activities and learning needs before, during, and after the school day.



UPPER LEVEL FLOOR PLAN

- 1 home base
- 2 seminar
- 3 vegetated roof
- 4 group instruction
- 5 teacher room
- 6 mediascape

100'

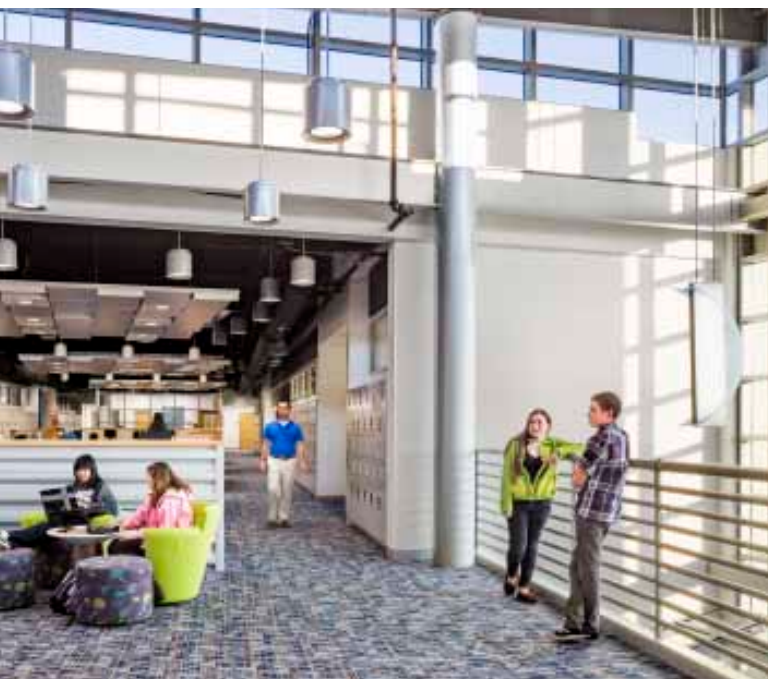






HOME BASE PROVIDES AGILE AND FLEXIBLE LEARNING SPACE TO SEMINAR ROOMS. WHEELED TABLES CHAIRS, WHITEBOARDS AND STORAGE UNITS CAN BE REARRANGED IN THE MOMENT TO SUIT SPECIFIC NEEDS WHILE WINDOWS VISUALLY CONNECT THE SPACE TO SEMINAR ROOMS.

**THE SCHOOL CAN BE ADAPTED INSTANTANEOUSLY TO NEW USES AND TO STUDENT AND TEACHER NEEDS.**



Student and teacher activity continuously flows between spaces based on the learning needs of the day or the student. Lightweight, moveable furniture in all spaces makes the school instantaneous adaptable - creating a school that is instantaneously agile and responsive to student and teacher needs. In addition to moveable tables and chairs, the spaces are equipped with rolling cabinets for the storage of student project work and supplies and wheeled white/tackboards that are used by students to subdivide the larger space as needed.





MEDIASCAPE KIOSKS ARE AN IMPORTANT COLLABORATION TOOL FOR STUDENTS AND TEACHERS. WHITE HOMOSOTE WALLS PROVIDE AMPLE TACKABLE SURFACES. KIOSKS ARE LOCATED DIRECTLY OUTSIDE THE MEDIA CENTER (SHOWN IN BACKGROUND) AND ARE THE PORTAL TO THE HOME BASE AREA. AREA IS DIRECTLY OUTSIDE TEACHER WORKROOM TO FACILITATE STUDENT SUPERVISION.

**MEDIASCAPE KIOSKS ARE INTEGRATED INTO THE HOME BASE ENVIRONMENT - ALLOWING STUDENTS TO SHARE THEIR WORK AND SOLVE PROBLEMS IN REAL TIME.**



Tackspace lines the inside of the half height walls -- providing options for temporary and semi-permanent display. Mobile tackboards are assigned to project teams and move with them throughout the space to allow for longer term display of working documents.

The open Home base area is ringed with a variety of closed learning studios that provide traditional classroom space, teacher workspace, and small seminar rooms.





SEMINAR ROOMS ARE PROVIDED WITH A VARIETY OF FURNITURE TYPES TO SUPPORT MULTIPLE STYLES OF LEARNING AND INTERACTION. WINDOWS CONNECT HOME BASE ROOMS TO HOME BASE AND PROVIDE A SENSE OF COMMUNITY AND SOCIAL CONNECTION. ALL ROOMS ARE OUTFITTED WITH WIRELESS TECHNOLOGY AND PROMETHAN BOARDS. WHEELED FURNITURE IS ROUTINELY RECONFIGURED.



**MOBILE FURNITURE GIVES TEACHERS AND STUDENTS UNLIMITED FLEXIBILITY AND OPTIONS.**

A variety of furniture was used in these rooms, enabling teachers and students to choose the furniture and room most appropriate for the type of interaction.



# THE HOME BASE ENVIRONMENT

**ABOVE:** HOME BASE IS DESIGNED TO OPEN UP MULTIPLE OPTIONS FOR STUDENTS AND TEACHERS TO COLLABORATE. THE SPACE IS CONTINUOUS AND IS GENTLY DELINEATED BY HALF HEIGHT WALLS. ASIDE FROM MEDIA SCAPE TECHNOLOGY, ALL FURNISHINGS IN HOME BASE AND SEMINAR ROOMS ARE REPOSITIONABLE.

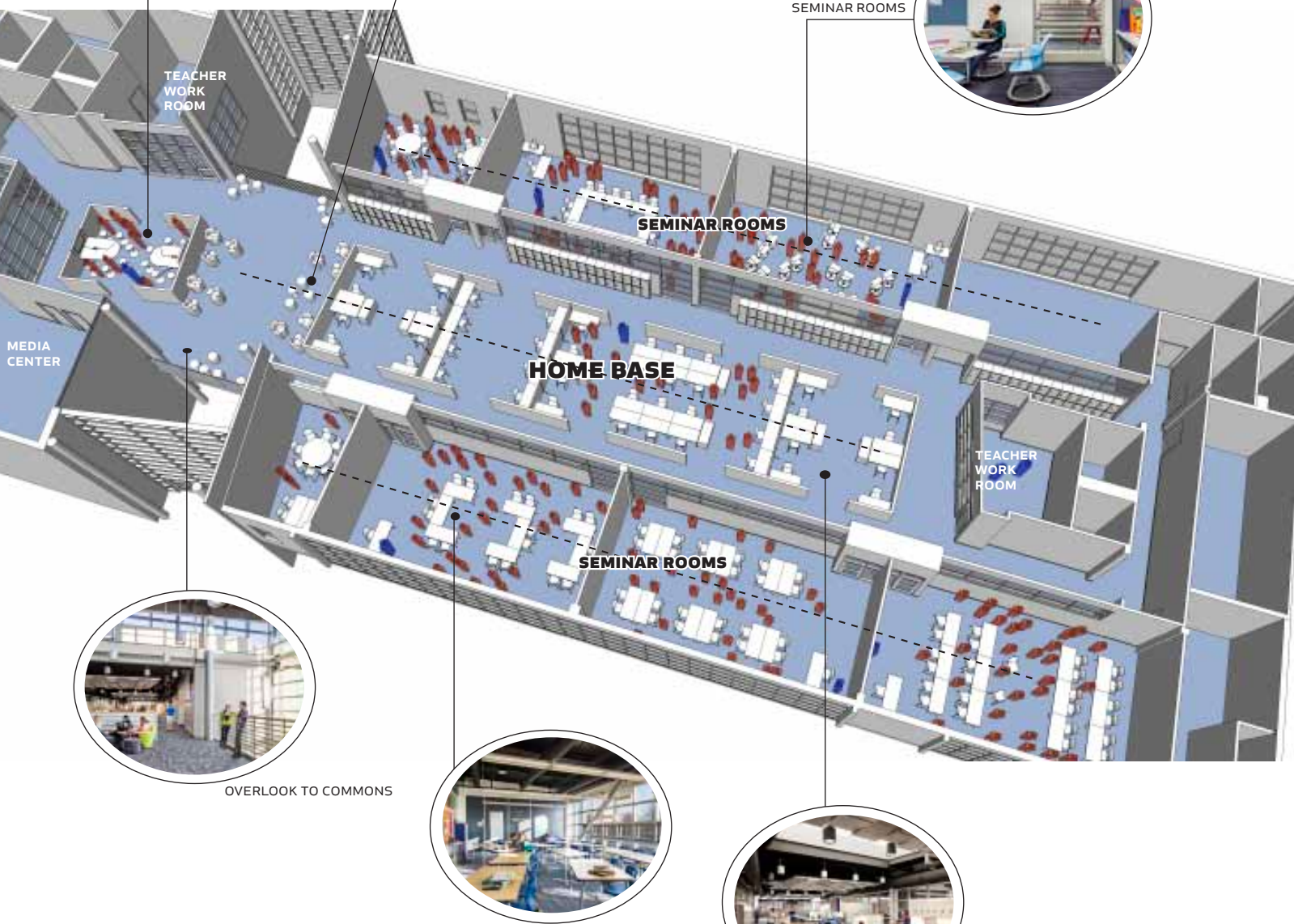
MEDIA SCAPE KIOSKS



SOFT SEATING



SEMINAR ROOMS



MEDIA CENTER

TEACHER WORK ROOM

SEMINAR ROOMS

HOME BASE

TEACHER WORK ROOM

SEMINAR ROOMS



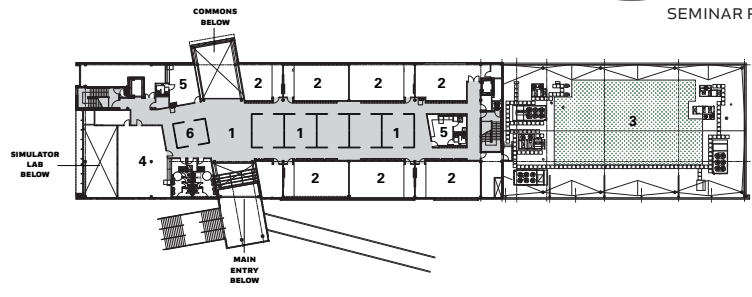
OVERLOOK TO COMMONS



SEMINAR ROOMS



HOME BASE



UPPER LEVEL FLOOR PLAN

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- 2 seminar
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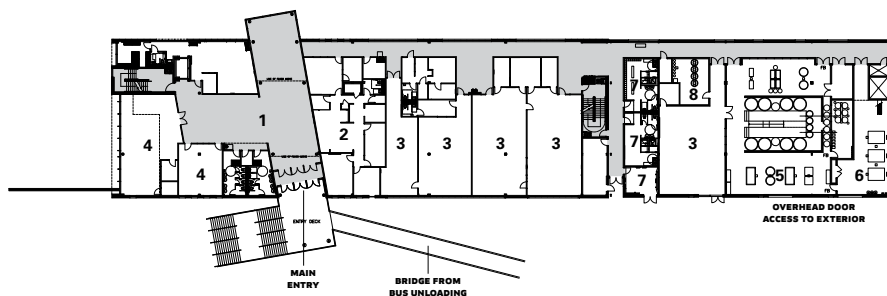
SIMULATOR LAB ON LOWER LEVEL CAN BE CONFIGURED FOR CLASSROOM AS WELL AS FOR GROUP INSTRUCTION. THIS ROOM IS VISIBLE FROM THE MEDIA CENTER (ABOVE), FROM THE COMMONS AREA (AT RIGHT) AND FROM EXTERIOR (LOWER PARKING AREA AND SIDE STREET TO AT LEFT).

**BELOW:** MEDIA CENTER OVERLOOKS SIMULATOR ROOM. USE OF GLASS BRINGS NATURAL LIGHT INTO THIS INTERIOR SPACE AND CREATES A VISUAL CONNECTION BETWEEN THE TWO.



**GLASS IS USED TO BRING LIGHT INTO THE INTERIOR AND TO PUT LEARNING ACTIVITIES ON DISPLAY.**

The school is equipped with a variety of spaces for formal lecture and instruction. Settings include small and large group instruction, advisory and small group breakout. All spaces feature storefront windows - to the exterior and to interior spaces - so learning can always be on display. Students have naturally taken a high level of ownership of the space and feel empowered to prescribe norms of behavior in the space that are in keeping with school culture and climate.



ENTRY LEVEL FLOOR PLAN

- 1 commons
- 2 admin
- 3 classroom / lab space
- 4 simulator lab
- 5 aquaculture lab
- 6 pump / seawater lab
- 7 mud room / locker rooms
- 8 algae room





THE SCHOOL'S ONLY TRADITIONAL HALLWAY RUNS THE BACK OF THE AQUACULTURE/LABORATORY CLASSROOM WING. INTERACTIVE COMPUTER KIOSK MONITORS SUPPORT THE USE OF THE HALLWAYS AS A BREAKOUT SPACE.



**ALL AREAS - INCLUDING CIRCULATION PATHS - ARE ACTIVE PARTS OF THE LEARNING ENVIRONMENT.**

The building's only circulation corridor is located along the back and connects the laboratory wing with the commons. Video kiosks are used to display student work and relevant outside resources. Storefront windows keep the corridor lit and allow natural light to penetrate into the interior.

The lack of traditional corridors and abundant internal windows encourage a sense of curiosity and engagement as students have the opportunity to observe the work of their classmates.

LABORATORY CLASSROOM WITH SYSTEMS TO OPERATE STATE-OF-THE-ART AQUACULTURE LAB, INCLUDING SALINATION SYSTEMS.





**THE AQUACULTURE LAB  
REPLICATES A REAL WORLD  
ENVIRONMENT.**

On the main level, the schools aquaculture and marine science labs are paired with classroom settings to support a flow of activity between instruction and hands-on work. Large overhead doors allow the lab activity to spill out to the paved outdoor work area; specifically designed to replicate the type of marine working environment that students may encounter after high school. Aquaculture lab includes propagation tanks, fresh to saltwater conversing system.





SIMULATOR LAB HAS FLEXIBLE AREAS FOR PROJECT WORK, LECTURES, OBSERVATION AND SIMULATOR INSTRUCTION.



COMMONS WITH SIMULATOR LAB BEYOND. LEARNING IS ALWAYS PRESENT AND ON DISPLAY. COMMONS AREA IS A MULTIFUNCTIONAL SPACE THAT IS USED FOR SCHOOL AND PUBLIC MEETINGS, AS A DINING HALL AND BUILDING AND SIMULATOR LOBBY AREA.

**TECHNOLOGY IN THE HANDS OF STUDENTS - PREPARING THEM FOR COLLEGE OR IMMEDIATE EMPLOYMENT.**

Philosophy of school considers all tools to be technology – everything from a clam rake or waders to state-of-the art simulators are visible and available. Facility makes space for and respects all these tools. Professional bridge and engine room simulators give students a powerful immersive experience. System can be programmed to simulate conditions at local as well as international harbors.





STUDENT COMMONS IS A FLEXIBLE AND LIGHT FILLED SPACE THAT SERVES BOTH A THE SCHOOLS LOBBY, MAIN ASSEMBLY SPACE. IT REMAINS CONTINUOUSLY ACTIVE FROM THE TIME STUDENTS AND STAFF ARRIVE IN THE MORNING UNTIL THE BUILDING IS CLOSED FOR THE EVENING.





STUDENTS WORK INDEPENDENTLY IN SIMULATOR ROOM.





STUDENTS APPROACH MAIN ENTRY VIA BRIDGE OVER CONSTRUCTED WETLANDS.



### **THE PROJECT RETURNED MORE OF THE SITE TO A GREEN STATE THAN THE PREVIOUS ELEMENTARY SCHOOL.**

Sloped site enabled placement of parking under building; when combined with efficient plan and vegetated roof the total green area significantly exceeds former use. The building is sheathed in metal panel manufactured with recycled content. Interior finishes include recycled and low VOC materials. The roof is covered with light colored roofing, vegetative material and photovoltaic units. Solar shading fixtures, included as part of the original design, were value engineered out of the project during design development. Primary building system is geothermal, with wells placed under ball and play fields. Building has occupancy sensors and daylight controls throughout. All site drainage channels through rain gardens, with one being a sophisticated constructed wetlands that is used for formal instruction. All specialized plumbing and systems for aquaculture laboratory are visible and accessible for instruction. Lab included a hands-on facility that converted fresh water into salt water.



**DISCUSSION OF THE SCHOOL'S SUSTAINABLE FEATURES IS A PART OF THE SCHOOL'S CURRICULUM.**

Project included reuse of site of vacant 1920's elementary school. While existing building infrastructure was not reused, the project preserved an existing ball field and playground. This open space was additionally used as the location of the schools geothermal well field - to power the school's heating and cooling systems.

By placing much of the necessary parking underneath the building, maximizing the building's efficiency, minimizing it's footprint and including a green space on the roof, the design solution restores more total green space to the site than had formerly been there.



## **RESULTS**



Peer mediation

## PROJECT OUTCOMES

From the onset, collaboration was stressed and stakeholders were an integral component of the decision making process. School culture and climate statements were created early in the process and were intended to remain core values that would consistently be honored. MSMHS has received considerable positive feedback from parents, students and teachers regarding the school culture and climate. The atmosphere has been consistently referred to as “family-like.”



Peer mediation

In alignment with the school’s culture and climate statement, the staff developed and adopted the use of phrases such as “*effort creates ability*” and “*all students can learn*” in their daily work with students - to underscore the importance of the program’s core tenets.

The founding committee felt an advisory program was central to the personalization of the educational experience at our school. The resulting program engages students in discussion of a wide range of topics such as goal setting, Student Success Plans, teamwork and collaboration, career goals, study skills, exam preparation, as well as bullying, cyber-bullying, teen suicide, teen dating violence, and their individual responsibility in





Students after school @ Home base

**theday.com**  
CONNECTICUT

## New Marine Science high school launches in Groton

By Chuck Potter



Dr. Nicholas Spera, director of the Marine Science Magnet High School, welcomes students Thursday in the great room of the school on the first day of classes.

maintaining a healthy climate and culture in the school. Similar attention is paid to the student ownership rubric about students taking responsibility for their own learning and behavior. The school community embraces and regularly references the four tenets of the school pledge: Safety, Effort, Respect and Responsibility.

Students come to the school from 26 different sending districts. All freshmen receive the same foundational instruction and are heterogeneously grouped in all courses during their first year. Faculty participates in advisory training prior to the start of school and meet twice every six days, for 40 minutes each time.

The school uses a block schedule that maximizes the amount of instructional time. The block schedule allows for 87 minutes per class with the built-in flexibility for advisory and for students to attend field trips. There is a Seminar of Academic Methods course is available for all students who need assistance with skill development in math, reading or writing, and our After School Homework Club meets on Tuesdays and Thursdays. With average class sizes of 13.6,

and the available resources, teachers are able to meet the learning needs of individual students. Faculty and staff at MSMHS consistently refer to the school's core values and learning expectations in interactions with all stakeholders and are constantly promoting collaboration and shared decision making with students, parents and faculty. Students are encouraged to understand the consequences of their actions and to share the school and the space as if it were their own.

The students take a high level of responsibility for how the building is used and respond to the space by using it promote their performance and tailor their individual needs for collaboration and interaction.

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Article published Jul 28, 2012

## New magnet school takes CAPT by storm

By [Chuck Potter](#) Day Staff Writer

**Groton** - The Marine Science Magnet High School of Southeastern Connecticut received nearly 500 applications for 75 open seats for the upcoming school year.

But that number could go up next year, when news spreads that the school's first sophomore class ranked among the state's best in the 2012 Connecticut Academic Performance Test. The school opened in September 2011.

School Principal Nick Spera said the school's small class size allowed the 22 sophomores to receive more attention than they might get in a larger school. All of the school's 10th graders met the federal proficiency level in all four test categories: reading, writing, science and math.

In writing, 95.5 percent of the students met the more rigorous state goal level, and nearly 91 percent met goal in reading. The magnet school's sophomores outperformed their counterparts throughout the state in those two test subjects this year.

The math scores showed the most room for improvement. The magnet school ranked 13th statewide, with 77.3 percent of the sophomores achieving goal.

"Yeah, we have to do something about that," Spera said with a grin. "Seriously, though, although that's a good number, we want to do better."

Spera said he also would like to improve the school's performance in the science portion of the test, in which 82 percent of students met goal, ranking third in the state.

Spera said a lot of people deserve credit for the success, beginning with the staff and students.

"In this building, we believe effort creates ability," he said. "All students can excel if they and the staff put forth the maximum effort. Our staff goes above and beyond for each and every student. If the students match the teachers' effort, we'll be fine."

Spera said the autonomy provided by LEARN, the educational agency that oversees the region's state magnet and charter schools, allowed him to set up a program in which the sophomores spent two hours each week in skill-building classes.

"For the first 40 minutes of the day, three times per week, the 22 sophomores were split into three groups and rotated through the different subjects," he said. "We're trying to close the achievement gap. Magnet schools allow all students to gain ground and achieve new levels of success."





LEFT: STUDENTS WORK IN THE FIELD WITH ONE OF THE SCHOOL'S INITIAL AND ONGOING STAKEHOLDERS - PROJECT OCEANOLOGY.

**STUDENTS SPLIT THEIR TIME IN HALF BETWEEN THE FIELD AND SCHOOL. INITIALLY LABELED BY PROJECT PARTNERS AS "WET" AND "DRY" DAYS, STUDENTS AND FACULTY FELT THE PHRASE "DRY" WAS NEGATIVE. THEY RENAMED THIS SCHEDULE "LAND" AND "SEA" DAYS.**

The Principal's Advisory Council, the PTO, Student Council and teacher subgroups that work on specific projects are working examples of this philosophy of meaningful and defined roles in decision making. The school's leadership ideal is that *"we're all in this together and we are all responsible for one another."* Whether the community is discussing student performance on assessments, bullying, friendliness or recruitment, the belief of shared responsibility is ever present.

Within weekly faculty and PLC meetings the Core Values are consistently addressed to ensure adherence to our beliefs that "effort creates ability" and "all students can learn." The Core Values drive curriculum, instruction and assessment as well as impact policies, procedures and decisions at MSMHS.

theday.com  
CONNECTICUT

### Tilapia are a prickly problem for Groton magnet school students

By Judy Benson

Publication: The Day

Published 01/25/2012 12:00 AM

Updated 01/25/2012 05:00 PM



Sean D. Elliot/The Day  
Cristina Pezzello, 14, of Waterford, scoops a net full of Nile tilapia from their tank at the Marine Sciences Magnet High School Aquaculture Lab to be measured Tuesday. Visit [www.theday.com](http://www.theday.com) to see a photo gallery.



Manifestations of the building's need to be engaging, agile and dynamic, and mission responsive included key features. Transparency is used throughout the building to put important functions on display, to facilitate student supervision, to promote socialization and development of community within the school and to create a more connected facility. Flexible and multifunctional spaces were created. The school's "Home Base" is a continuous, multi-setting space that forms the heart of the second floor classroom area. It is technology rich, with responsive and interactive furniture and fixtures and supports socialization, project based learning, informal and formal group uses. Interior areas are linked by a variety of spatial experiences. Continuous flow and gentle visual delineation of these areas converts spaces that would traditionally be set aside for circulation or core functions into active parts of the learning environment.





## TESTING RESULTS

In March of 2012, sophomores took the CAPT exam, which is administered to every 10th grade student in each Connecticut Public High School. CAPT reading, writing, mathematics, and science scores are then publicly reported by the Connecticut State Department of Education by district and individual school in two main categories: Proficient and Goal and Above. According to the SPI formula, MSMHS ranks #1 in the state in Science, Reading and Writing. MSMHS also ranks #8 in Mathematics by Department of Ed.

These scores are attributed to the incredible work ethic of students and teachers along with the support of parents and community. Members of faculty and staff believe these results are reflective of promotion of the values “effort creates ability” and “all students can learn” in their daily work with students.



## **ORIGINAL LEARNING OBJECTIVES - RESULTS**

Students, in cooperation with their teaching staff and families, will

- o Demonstrate a sense of self as a learner
  - o Demonstrate a sense of responsibility to self and others
  - o Demonstrate effective functioning, individually and as a member of a group
  - o Demonstrate the ability to think critically, solve problems, reason, and question
  - o Use language to communicate, convey, and interpret meaning
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**Testing Results/Metrics:** In March of 2012, sophomores took the CAPT exam, which is administered to every 10th grade student in each Connecticut Public High School. CAPT reading, writing, mathematics, and science scores are then publicly reported by the Connecticut State Department of Education by district and individual school in two main categories: Proficient and Goal and Above. According to the SPI formula, MSMHS ranks #1 in the state in Science, Reading and Writing. MSMHS also ranks #8 in Mathematics by Department of Ed.

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**Student Population:** MSMHS visits each middle school in Southeastern Connecticut for student and parent presentations. In 2012, 486 applications were submitted for 75 spaces. The racial diversity of the applications exceeded the demographics of Southeastern Connecticut threefold. The recruitment process continues in the fall with open houses for prospective students and parents that allow parents and students to hear from the MSMHS principal and receive a guided tour from a current MSMHS student. Recruitment efforts are continued throughout the lottery process in January with phone calls from the Principal and student council members, letters, a dance for incoming freshmen, updates on the website, and freshman orientation. The retention of our diverse population comes from the culture and climate set at MSMHS. Advisory allows students from different ethnic races and experiences to interact with one another about academic and emotional topics 60 times a year. This process allows teacher and home to bond together closely. Families in need of a translator are supported with all available efforts. School-wide diversity is celebrated throughout the school in advisory and through the various clubs such as the Multicultural Club, Peer Mediation, Rotary-sponsored Interact Club, Gay Straight Alliance, and Dream Team for Diversity.

# GrotonPatch

## Marine Science Magnet School 'Glee'fully Recruits

Region's newest high school created a fun video to spread the word



### Videos



<http://o4.aolcdn.com/dims-shared/dims3/PATCH/resize/273x203/http://hss-prod.hss.aol.com/hss/storage/patch/c9644833f0d4d73f799e965bece6cb64>

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[http://groton.patch.com/articles/marine-science-magnet-school-glee-fully-recruits/media\\_attachments/](http://groton.patch.com/articles/marine-science-magnet-school-glee-fully-recruits/media_attachments/)

The Marine Science Magnet School, which opened its doors in September, is currently recruiting for its Class of 2016. To spread the word about what the school has to offer, its students and faculty created this really fun video.



USE THE QR CODE AT LEFT TO WATCH THE STUDENT'S RECRUITMENT VIDEO

**Professional Development:** The

focus at MSMHS includes:

- a. Professional Learning Communities;
- b. NEASC;
- c. SRBI;
- d. Common Assessment;
- e. Technology in the Classroom;
- f. Data Driven Instruction;
- g. Principles of Learning;
- h. Understanding by Design Curriculum.

**Theme and Experiential Learning:**

The Marine Science theme allows the school to offer exciting opportunities to learn common core content in a unique and fun way. The hands on experiential learning offered in our state of the art Aquaculture Lab and

Boat Simulator could and is being replicated on the local level in other surrounding schools. Our strong culture and climate has been attributed to the advisory program that has been created at MSMHS. This advisory model can work at any high school of any size.

**Implementation of an Advisory Model:** MSMHS has presented the advisory model that exists at the state level. In addition, Student Success Plans were also shared with professionals attending the conference that was presented by LEARN at CAS. Regular communication exists between MSMHS and local high schools regarding the use of technology in the classroom and with student learning. Local principals in Southeastern Connecticut meet quarterly to discuss best practices.

**School Readiness:** The greatest challenges come with the mystery of the lottery. As with the lottery process of all regional magnet schools, schools like MSMHS do not know the skills and behaviors of most students until they arrive. The preparation needed for several students can cause staffing, building, and schedule conflicts at the start of the year. As we continue to wait for documents from the sending districts, we would ask for the CSDE to provide regional magnets the opportunity to assess CMT data for all sending students through the SASI number assigned to each student. With the 2012-13 goal of each student reaching proficiency on the CAPT, several interventions are needed for a large percentage of students. Moreover, as with any school district, additional funding and space is necessary to achieve the goal that all students will succeed as measured by the CAPT.

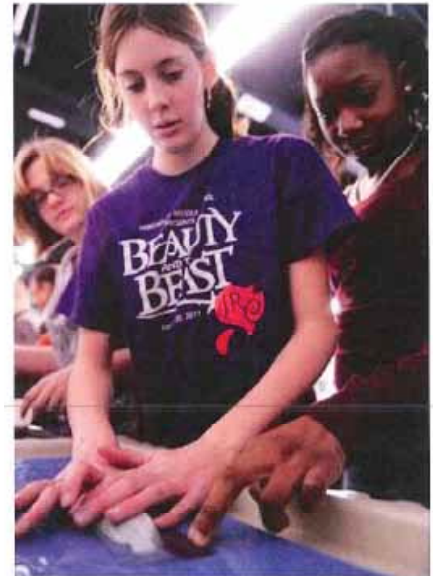
**Tilapia are a prickly problem for Groton magnet school students**

By Judy Benson

Publication: The Day

Published 01/25/2012 12:00 AM

Kassie Parsons, 15, left, of Norwich, and Khiara Phillips, 14, of New London, right, watch as Jordan Morace, 14, of Stonington, measures the length of a juvenile Nile tilapia growing in the aquaculture lab at the Marine Sciences Magnet High School in Groton on Tuesday.



"I've always been interested in science," said Presti, whose job during that day's lab was to record the length and weight of each fish as other students placed each one on a scale, then along a ruler, calling out the numbers. Later, the numbers would be entered into a spreadsheet and graphed.

"Oh, we've got some floppers," said Litvinoff, as one of the sleek striped fish flipped onto the concrete floor from a net a student was using to transfer it from the tank to the measuring table. Another student quickly scooped up the escapee.

"These guys are lively," Litvinoff said.





Dana Jensen/The Day

Brittany Hernandez, ninth grade, and her fellow students applaud as their teachers are introduced to the student body Thursday during the first day of school at the new Marine Science Magnet High School in Groton.

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CONNECTICUT

**Groton** - "This is going to be a safe, fun environment. We have fish."

That's what School Director Nicholas Spera told the more than 100 first-year students at the Marine Science Magnet High School on Shennecossett Road Thursday morning.

About 80 freshmen and 24 sophomores from 24 eastern Connecticut towns sat wide eyed and anxious beneath lights with "sails" for shades and the high ceiling of the school's Great Hall, listening to Spera's welcome address.

"You're the first students ever in the Marine Science Magnet High School," he said. "That can't ever happen again. Congratulations."

Landscaping, painting and other last-minute details were being tended to just after 7:30 Thursday morning when the classes of 2014 and 2015 arrived. The MSMHS is operated under the authority of LEARN, the Old Lyme based regional education service center. The school will focus on preparing students for marine-related employment and higher education.

"I'm a little nervous," said Samuel Maldonado, a 13-year-old freshman. "I think I'm going to like it. I live near Bluff Point (Coastal Reserve). I've always been interested in marine science."

Eric Litvinoff, 24, was as excited as the students. He was starting his first full-time teaching job in a new building, with new students, new co-workers and a new curriculum.

"It's a great school, a great staff," the aquaculture teacher said. "I've met some of the students. It's exciting. I'm loving it."

Michelle Scarlett of East Lyme delivered her 14-year-old son Kenan to the school.

"I love the design of the building, the way they take advantage of the natural light," she said. "And because it's new, some of the classes will have a very small student to teacher ratio, like 7-1."

She said she was impressed by the school's aquaculture and marine science laboratories.

Spera pointed out tanks in the labs, touting their capabilities. "We can simulate any body of water in the world," he said. "The Thames River or the coastal waters off Jamaica. And it's all handicap accessible."

The students, who will each be assigned a laptop computer, will split their time between "land" days in the classroom, and "sea" days, when they will work either in the marine science labs or on a sailing vessel with Project Oceanography.

Annalise Rois, 15, from Mystic said the school was a good fit for her career hopes.

"I really like marine science, so it's a good opportunity," she said. "I want to be scientist or a biologist."

While most of the students are happy to be there, Haley Fogg's enthusiasm was unmatched. Fogg, a 15-year-old from Ledyard, is Sea Scout. She and Rois had met earlier in the summer on a voyage on the Half-Moon, a full-scale, operating replica of the Dutch exploration ship that Henry Hudson sailed in 1609.

"I love the ocean. I just want to be in it, on it," she said with a smile and a laugh. "The aquaculture lab is so awesome. I love this school."

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Math teacher Megan Clay met the group of sophomores she'll be advising and teaching for the next three years.



Meghan Wynne, of Hebron, talks with classmate Josh Hatcher-Sneed while the class gets to know one another



Meghan Wynne, of Hebron, and Josh Hatcher-Sneed, of Groton, get to know each other during an "icebreaker" exercise on the first day of school.



Teacher Megan Clay asked the class, "who gets distracted easily?"

## SUMMARY OF OTHER KEY ACCOMPLISHMENTS

### BEST PRACTICES

Common Assessments

Heterogeneous grouping of all 9th grade courses

Student Success Plans created and reviewed monthly

Incorporation of the Principles of Learning

Professional Development and Implementation of Professional Learning Communities • SRBI Partnerships with schools in/ out of district

Partnered with the Waterford Public Schools Department of Special Education to share professional ideas regarding a CAPT Skills Seminar at Waterford High School to mirror Waterford's successful program

Principals Round Table Meeting – the principals from Southeastern Connecticut, which include our Governing Board Districts, met monthly to discuss topics such as Best Practices, Technology and Transportation challenges and solutions. School Accomplishments





Josh Hatcher-Sneed jokes with a new classmate



Teachers gave tours of the school to their new students on the first day



Teacher Megan Clay is "beyond excited" to begin the school year at the Marine Science Magnet School.



Teacher Megan Clay gives student Mackenzie Cote, of Ladyard, her new locker combination.

The creation and development of an initial mission statement which evolved into our Core Values, Beliefs and Learning Expectations statement.

August 2012 – NEASC initial visit regarding Candidate Accreditation status • The development, adoption and use of School-Wide Rubrics, Academic Competencies, Civic and Social Competencies • The development and completion of curriculum for every course taught; all curriculum and corresponding syllabi are posted on our website. All curriculum is written in uniform format and includes the following for each unit of study: The Essential Questions, The Enduring Understandings, The Description of Course Content, 21st Century Learning Expectations and Learning Skills, The Specific Objectives students will perform The Specific Assessments to be used, and The Resources to be used

Publication of School Yearbook: The Navigator, and Literary Magazine: Literary Latitudes • Publication of five issues of the School Newspaper – The Mariner

Students recorded the top scores in the state on the Reading and Writing portions of the CAPT test, third in the state on the Science portion of the CAPT, and tenth in the state on the Math portion of the CAPT • Completion of Initial NEASC Self-Assessment for the Candidate for Accreditation Application process School/Instructional Innovation

Advisory: Students participated in Advisory two days out of every six day cycle, for 40 minutes each session, amounting to over 60 Advisory sessions per school year for each grade.

Students received a full day of science three days out of a six day cycle

## First Day For Marine Science Magnet School

A First Day For Both Students And School

- By Jessie King
- September 2, 2011

The Marine Science Magnet School on Shennecossett Road began classes Thursday despite widespread power outages throughout the region, which has caused many school districts nearby to delay the first day of school to next week.

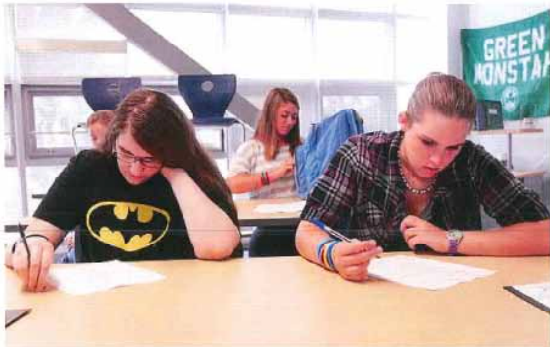
"I've worked 15 years to get this school open and there's a hurricane," said Executive Director Virginia Seccombe, of the most recent delay.

The school's construction has been riddled with delays and for the past 15 years and just recently started enrolling students. Its school year began Thursday, one day later than planned.

"We weren't sure how many kids would be able to make it," said Nicholas Spero, the school's director.

Many of the 24 sending districts could not provide transportation students attending the magnet school because they were not in session.

Spero said only five kids were absent on the first day. "Everyone's so excited to be here," he said. "Can't you feel the energy?"



Lillian Beane, of Groton, and Faith Bacon, of Ledyard, begin the first day of school by filling out a questionnaire about themselves and a neighbor

Uniform grading practice across all disciplines

State of the Art Aquaculture Facility

Stakeholders involved in decision making (students and parents on interview committees, Student Council involved with major decisions impacting school community) • Seminar in Academic Methods course available for all students • Incorporation of PE/Health and Art into Science

Curriculum Community/Business/University Partnerships

Current partnerships include Johnson and Wales University, The University of St. Joseph, Roger Williams University, UCONN Avery Point, The United States Coast Guard Academy, Grossman's Seafood (distribution of raised aquatic animals), New England Science and Sailing (sailing team and summer program), Mystic Aquarium, Mystic Seaport, the Mystic Arts Center, Department of Energy and Environmental Protection, Project Oceanology and the New London Water Authority.

Created and passed CT House Bill 5447 – 2012 General

Assembly to provide for the licensing and inspection of facilities cultivating, processing and supplying aquatic animals in the state for human consumption and to promote scallop production in the Niantic River. This law allows our aquaculture facility to sell farm raised aquatic animals (tilapia, rainbow trout, soft-shell crabs, oysters, shrimp and striped bass) Volunteer Participation • Creation of an active Parent/Teacher Organization (co-led by Parent and Teacher) • Hosted an adult Spelling Bee fundraiser event

### PARENT SATISFACTION

Parents surveyed about all aspects of MSMHS • 94% of parents Strongly Agree that the Teaching Staff is caring, involved and helpful o 100% Agree and Higher • 94% of parents Strongly Agree that the Principal is caring, involved and helpful o 100% Agree and Higher • 93% of parents Strongly Agree that MSMHS prepares student for further education and/or employment o 100% Agree and Higher • 88% of parents Strongly Agree that communication among MSMHS staff and parents is open and effective o 100% Agree and Higher • 91% of parents Strongly Agree that MSMHS values parental involvement in the child's education o 100% Agree and Higher



**COVERAGE BY LOCAL TV NEWS CHANNEL (CBS AFFILIATE)**

ON FOUR SEPARATE OCCASIONS, THE SCHOOL HAS BEEN COVERED BY THE STATE'S LARGEST LOCAL NEWS STATION. ALL COVERAGE HAS BEEN PART OF THE STATION'S "COOL SCHOOLS" FEATURE THAT COVERS INNOVATIVE APPROACHES TO EDUCATION ACROSS THE STATE.



**COOL SCHOOLS:** LEARNING TO NAVIGATE THE SEAS - FOCUS ON SCHOOL'S BRIDGE SIMULATOR AND CURRICULUM AROUND IT.



**COOL SCHOOLS:** FEATURE ON NEWLY OPENED SCHOOL AND REACTION FROM STUDENTS, TEACHERS AND PARENTS



**COOL SCHOOLS:** FEATURE INTERVIEW OF THE PRINCIPAL ABOUT WHAT STUDENTS ARE LEARNING AND THE MARINE SCIENCE PROGRAM.



**COOL SCHOOLS:** COVERAGE FOCUSED ON TECHNOLOGY IN SCHOOLS AND HOW STUDENTS ARE RESPOND TO THE MEDIA SCAPE KIOSKS

## Students train to navigate vessels

By Judy Benson

Publication: The Times

Published 02/09/2012 12:00 AM

Updated 02/07/2012 05:03 PM



Sean D. Elliot/The Day

Aquaculture instructor Eric Litvinoff, left, debriefs his students after a session on the school's new Kongsberg ship simulator at the Marine Science Magnet High School of Southeastern Connecticut in Groton. Buy Photo

**Groton** - Lindsay Warner of Lebanon has been boating with her parents since she was 6 weeks old, while classmate Josh Hatcher's on-water experience has been limited to about 15 minutes on his neighbor's vessel.

Despite the wide variation in their boating experience, the two sophomores at the Marine Science Magnet High School of Southeastern Connecticut are learning the basics of operating their own vessel side-by-side on one of the most impressive pieces of new technology available in any public school in the region.

"It's really cool," said Hatcher, a Groton resident, of the vessel simulator he, Warner and 10 other students in teacher Eric Litvinoff's noontime class were working on one day last month.

The simulator, installed just before the December holiday break, has five screens that depict - with realism that can be dizzying as the sea tosses the virtual vessel in wind, rain and snow - a passage through various actual locations. Just below the screens are vessel bridge stations with a navigational

## COMPUTER AND TECHNOLOGY RESOURCES

Each student at MSMHS received an IBM ThinkPad laptop for their use for the school year. LEARN provided the technical support and troubleshooting for the laptops

School-Wide wireless network always available 11

Promethean Boards in most classrooms, portable Promethean boards for others iPads and e-readers available for classroom use

The Collaborative Integration Center for small group self-directed learning projects

State of the Art Ship Bridge Simulator actively incorporated into the curriculum

## BEFORE AND AFTER SCHOOL PROGRAMS AND ACTIVITIES

The establishment of school clubs. All clubs led by faculty member who volunteered to be the staff leader for the weekly meetings. The following clubs

were created and met regularly: Art Club, Baking Club, Debate Team, Fishing Club, Gay, Straight Alliance (GSA), Homework Club (Two days per week, meets till 4:00, all teachers are available for students after school), Interact Club, Math Team, Music Club, Newspaper/Journalism Club, Photography Club, PTO, Student Council (Representatives from each Advisory Group), VRep Club (Computer Club), Yearbook Club. Professional Development Activities

Before school began the following full-day Professional Development activities took place for all faculty

Relationship Building, School Culture and School Climate, Developing Core Values

Curriculum Development - UBD, Writing and Lesson Plan Development

Professional Learning Communities, Diversity and Crisis Training, Bullying and Cyber bullying

The Principles of Learning, SRBI, Data Driven Decision Making, Special Education



## 21ST CENTURY LEARNING SKILLS

Tools for Teaching – Instru [http://media.nbcconnecticut.com/images/654\\*368/marine\\_722x406\\_2148494730.jpg](http://media.nbcconnecticut.com/images/654*368/marine_722x406_2148494730.jpg) ction

School Culture and Climate (creating a goal), Marine Science 101, Advisory

School Wide Rubrics, curriculum and lesson development

Learning Objectives, more curriculum and lesson development

Curriculum and Lesson Development, Curriculum Maps

Curriculum and Lesson Development

School-year Professional Development, all full-day

Promethean Board Training

IEP/SRBI/504, Academic testing

Lesson Planning, Objective Writing, Assessment

Culture Climate/School Culture, Team building, Master Schedule building

## INSTRUCTIONAL INNOVATIONS

The Aquaculture Lab

The Ship Bridge Simulator

Printer-friendly version - TheDay.com

Page 1 of 1

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Article published May 10, 2012

### Legislature paves way for magnet school to sell tilapia harvest

JC Reindl

**Hartford** - The state Senate gave final legislative approval late Wednesday night to a two-part bill that tightens regulations for harvesting Niantic River scallops and allows students at the Marine Science Magnet High School of Southeastern Connecticut to sell their aquarium-raised fish.

The legislation passed with only 10 minutes to go before the General Assembly's midnight session deadline. It now awaits Gov. Dannel P. Malloy's signature.

Students at the Groton magnet school have raised 600 tilapia and rainbow trout that they plan to sell to Grossman's Seafood in Groton and Mystic for restaurant distribution and market sales. The bill would allow them to do that by streamlining the licensing process for aquaculture systems that cultivate seafood for eating.

The bill also prohibits the taking of juvenile scallops that can pass through a 2½-inch ring. The current standard is a 2-inch ring.

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STUDENTS VOLUNTEERING AT BLUFF POINT COMMUNITY CLEAN UP DAY.

### **ACHIEVEMENT OF COMMUNITY GOALS**

School was the result of a 10-year effort by regional educational service provider to bring together surrounding member districts, parents, and regional educational institutions in development of a new high school to prepare students for higher education and/or marine related employment. The school's building committee included a diverse group of educational partners. Many of these partners have continued on with the program and provide an invaluable resource to the students and school.

Like many coastal communities, the State of Connecticut has many towns that once had thriving waterfronts -- places of commerce, industry and strong communities. The towns of Southeastern Connecticut now have a vibrant program that is promoting study of the marine sciences and encouraging students to explore their options for marine related employment. Whether these students go on to higher education or choose a path of immediate employment, connecting them with in-the-field knowledge and practical skills while developing an understanding of the marine environment will have far reaching implications for these industries and for the region. These students have direct access to regional experts and have become empowered and knowledgeable members of their communities and supporters of the marine environment.



## Tilapia are a prickly problem for Groton magnet school students

By Judy Benson

Publication: The Day

Published 01/25/2012 12:00 AM

### Marine Sciences freshmen learning how to raise fish

**Groton** - For these high school freshmen, one of their earliest and most important lessons didn't involve "Romeo and Juliet" or the history of world civilizations, but how to handle a live tilapia without getting pricked by its spiny dorsal fin.

Not that the 108 students at the Marine Sciences Magnet High School of Southeastern Connecticut aren't learning about those other topics. It's just that acquiring tilapia-handling skills has a more immediate practical benefit - avoidance of pain and injury.

"I've gotten stuck a couple of times, but then I got the hang of it," said Anthony Jordan of Waterford, 14, after spending part of his morning Tuesday measuring tilapia in the school's aquaculture lab. "You carefully come on top of them with your hand and bring them out.

"This is an awesome experience," he said of his first year thus far at the school. "I've always wanted to work with fish, and now I've got the chance."

Jordan and his classmates, part of the inaugural freshman class at the new school, spend part of every other school day in the aquaculture lab engaged in various tasks related to raising tilapia and rainbow trout, from feeding to water testing to periodically weighing and measuring them, then graphing their progress.

One of the lessons involved real-life troubleshooting about the cause of death of about half of the original stock of trout that arrived at the school just before the December holiday break. Ultimately, the students determined that one of the trout became trapped in the filter of the tank and died. Then, as it decayed, it released ammonia into the water and poisoned the other fish.

About 400 tilapia and about 150 trout are growing in the lab's 700-gallon tanks, said Eric Litvinoff, teacher in the aquaculture lab. Water temperature in the tilapia tanks is about 85 degrees, to simulate their native African pond environment, while the temperature of the trout tank is about 55 degrees, like a stream in the Pacific Northwest.

At the end of the school year, the tilapia will be ready for sale to local fish markets and restaurants, Litvinoff said. The trout will take another year to mature.

"Tilapia grow very fast, so kids can really see the growth," he said. "They're very robust, so they can withstand a little more."

Later this year, he added, students will learn from a chef how to prepare and filet live fish for market. In business classes at the school, students will develop marketing plans to sell the fish to restaurants and fish markets.

Nicholas Spera, principal of the school, said the aquaculture lab is integral to the school's curriculum, and one of its more interesting features. As freshmen, students raise the two freshwater species as an introduction to aquaculture. By the time they're seniors, they'll be engaged in more complex aquaculture projects, including lessons with oysters and other shellfish in marine environments. This spring, students will seed eight oyster beds off Pine Island that have been donated to the school.

Spera said the school, which has a capacity of about 250 students, received 486 applications for the 76 slots open in the freshman and sophomore classes for next year. The applications came from throughout New London County and beyond, including Westbrook and Clinton, he said.

Angelina Presti of Preston said she's glad she's enrolled in the school.

## Students train to navigate vessels

map, radar map, electronic GPS, magnetic compass, vessel information screen and a center console with a phone for emergency calls, a steering wheel, thrusters, horn and other controls. The system also has a teacher's station and an engine room, where students can troubleshoot malfunctioning equipment.

"It's awesome," said Sam Sabilla of New London, one of the students in the class. Obviously, his enthusiasm for the virtual experience the equipment offered him hasn't been dampened by his extensive real-life experience on the water, on sailing vessels and motor boats.

The school, which accepts students from throughout New London County, opened in September. It now has about 108 students, but that will eventually increase to a capacity of about 250 as new students are brought in each year.

Principal Nicholas Spera said that when the simulator arrived, the school schedule was retooled to give all students time on the equipment. It's an integral part of the school's curriculum, and the scenarios students practice on the simulator are incorporated into lessons in math, science and other subjects, he said.

"We're also looking into having every student get their boating license, and letting them earn hours towards their pilot's license on the simulator," Spera said.

During class, students drove their virtual vessel, a 50-foot fishing boat, through various hazards in Bridgeport Harbor.

"You are leaving a channel you have a cargo boat coming at you, and a head-on collision could occur," said Warner, describing the scenario she and her team developed for another group to try out on the simulator.

As the scenario played out with a group at the console, Litvinoff called out reminders from the teacher station.

"Stay in the channel. Green on your right, red on your left," he said. "You've got another boat coming off your starboard side. Do you see the other boat? Constantly be looking."

The team managed to avoid the cargo boat, and another group took their place to practice a scenario that involved overtaking another vessel. The next group maneuvered their boat across a channel safely.

"Basically," said Litvinoff, "we want kids to come away with a solid knowledge of navigation."

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Article published Feb 14, 2012

## Student mediators teach the skill of how to get along in Groton school

By [Chuck Potter](#) Day Staff Writer

### Teens police each other in matters that don't rise to level of disciplinary action

**Groton** - Counselors and administrators have more important things to do than figure out who said what about whom, and what to do about it.

So said 11th-grader Taylor MacCracken, a peer mediator from Montville High School. She and three of her fellow mediators were in Groton Monday to teach their skills to 12 newly appointed mediators at the Marine Science Magnet High School.

"No offense to the administrators or teachers," Montville's Carlie Cave said. "But if two girls get into an argument in the hallway, they both get sent (to) ISS (in-school suspension). Teachers don't always have the time to deal with it. So it's better for everybody if they just go to mediation and we help them solve it."

The Montville students are part of a 16-person team at their school of nearly 800 students.

Mediators hear issues that don't rise to the level of disciplinary action or deal with dangerous behavior.

In a mock mediation, one girl was angry at her friend for receiving the affections of the first girl's ex-boyfriend. The "mediators," Isaiah Holloway and Kerri St. Denis, listened carefully to what Cave and MacCracken "had to say" and discussed with them ways the two could manage to get along. Their agreement included no stare-downs and civil conduct in class together.

"You're not trying to make them friends," Cave said. "They just have to learn to be civil and respect each other."

The program works well at Montville, said Deborah Spera, school psychologist at Montville and wife of Nicholas Spera, the magnet school principal. She said the program works because the students know the process works, and they believe in it.

"When they see how things work out, they know it's not (fake)," said Kerri St. Denis, a 17-year-old senior and president of Montville's Peer Mediation Team. "It creates a good environment. Kids really do care about the atmosphere in the school."

The students conducted the workshop on their own, while the Speras, for the most part, looked on, interrupting only to offer salient advice.

"It's important for the disputants (to) tell their friends when the problem is solved," Deborah Spera said. "You don't want people continuing after the problem is resolved. That just leads to the need for more mediation."

As the new magnet school, in its first year and composed mostly of freshmen and a few sophomores, grows, the need for mediators will as well.

"I think it will work here," said Kate Green, the magnet school's student body president. "We're just 108 students, and we all helped start this school, so we're pretty close. But we're all curious about the next class coming in. The bigger the school gets, the more we'll need it."

St. Denis said being a mediator is good for the mediator, too.

"Helping others helps me feel stronger and good about myself," she said. "Someone referred to me as 'Peer Mediator Girl' the other day. That made me feel really proud."

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Article published Mar 17, 2012

## State lawmakers get fish story from marine sciences group

By JC Reindl Day Staff Writer

### Magnet school seeks legislative OK to sell tilapia, trout raised in aquaculture project

**Hartford** - Students at the Marine Sciences Magnet High School of Southeastern Connecticut are busy raising nearly 600 tilapia and rainbow trout in giant aquariums, scrubbing the walls of a dozen tanks and administering twice-a-day feedings.

But whether any of their fish appear on the menu at local restaurants could depend on the outcome of a legislative proposal spearheaded by their principal, Nicholas Spera, and state Sen. Andrew Maynard, D-Stonington.

The bill, which would streamline the state licensing process for aquaculture systems that cultivate seafood for human consumption, is slowly moving up the General Assembly's channels. Aquaculture is the controlled raising and harvesting of marine life.

On Friday, Spera led a delegation of four students and two teachers from the Groton school to a meeting room in the Capitol complex to testify before the legislature's Environment Committee. He was the last speaker at the daylong public hearing, which began at 10 a.m. and ran until 6:30 p.m.

"This legislation will provide the students with the hands-on learning experience and skills that will equip them with the knowledge to become future leaders in business and aquaculture," Spera told lawmakers, adding later, "We just want to sell our fish."

A second part of the bill, separate yet seafood-related, calls for tightening the regulations for harvesting scallops in the Niantic River.

State Rep. Ed Jutila, D-East Lyme, said the goal is to keep more juvenile scallops in the river so that the overall population can grow over time.

The measure would prohibit the taking of scallops that can pass through a 2½-inch ring. The current standard is a 2-inch ring. It also would clarify the legal authority of the Waterford/East Lyme Shellfish Commission to set limits on the number of scallops a person can harvest in one day.

The commission's current volume limit is one peck, which is one-quarter of a bushel. The size of the scallops determines the number in a bushel.

Commission Co-Chairman Eric Kanter said the law's existing language dates to 1949, when Niantic River scallops were famous and more abundant, and their lifecycle wasn't fully understood. Bay scallops generally live for just 18 months to two years, so it is important that those smaller, immature bivalves be given time to spawn, he said.

As for those 600 tilapia and trout, the magnet school has a tentative agreement to sell part of its full-grown harvest to Grossman's Seafood of Groton, a retail and wholesale dealer.

Sean Coleman, Grossman's general manager, reached out to the school last fall shortly after the opening day of its inaugural year.

Coleman learned that the school wanted to introduce students to the business side of aquaculture, not only the marine biology. So he offered to do business with the teen entrepreneurs.

If the school can gain the regulatory approvals needed to sell Coleman the tank-raised fish, Grossman's could offer the fish to scores of restaurants and put a few on ice for purchase at



its marketplace.

"We're excited about getting the kids involved from tank to table," Coleman said by phone Friday.

The marine sciences magnet school is one of three regional marine high schools in the state. It opened in September to just over 100 freshmen and sophomore students who hail from 26 school districts. The school plans to grow to serve grades nine through 12.

The students' aquaculture lab began raising the fish from the fingerling stage late last year.

"We've had them since they were teeny-tiny and it's fun to see them growing," said Kate Green, 15, of Stonington.

So far the only setback came when a trout got stuck in a tank filter and died, releasing ammonia into the water that killed about half of the original trout stock.

In addition to Green, the students who accompanied their principal Friday - Tyler Urena of Groton, Ethan McDowell of New London and Meghan Wynne of Hebron - must give presentations to their classmates on what happened at the Capitol.

"This is four students who are getting to live the curriculum," said Annie Pascuzzi, their civics teacher.

The Environment Committee heard public testimony on 16 different bills Friday, but has yet to vote on them.

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