

2016 NEASC SELF-STUDY REPORT



MARINE SCIENCE MAGNET HIGH SCHOOL



Written and Submitted for
NEASC Accreditation
January 2016

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MARINE SCIENCE MAGNET HIGH SCHOOL 2016 SELF-STUDY REPORT



STANDARD 1: *CORE VALUES, BELIEFS, AND LEARNING EXPECTATIONS*

RATING: EXEMPLARY

Standard 1: Core Values

NARRATIVE

The Marine Science Magnet High School community always engages in a dynamic, collaborative, and inclusive process informed by current research-based best practices to identify and commit to its core values and beliefs about learning. Prior to the start of Marine Science Magnet High School's (MSMHS) first school year in the summer of 2011, the Principal of MSMHS presented professional development to the new faculty. One activity involved reviewing and discussing the original mission statement written by the MSMHS Planning Committee in 2005. The Principal, along with the eight teachers hired at the time, met to consider the overarching question: "What vision do we have for this school?" During a gallery walk, participants were asked to write down what key ideas they believed should be a part of the school's core values. The second step allowed staff members to review each piece of paper and mark those comments with which they agreed. In conjunction with this activity, the group adopted the University of Pittsburgh's Institute for Learning Principles of Learning with a focus on Organizing for Effort, Recognition of Accomplishment and Accountable Talk.

Furthermore, when creating the MSMHS Core Values, Beliefs, and Learning Expectations, the faculty and staff were cognizant of the changes in the details of the New England Association of Schools and Colleges (NEASC) Standards and considered those changes in their review and discussion. In August 2011, the faculty and staff created the following culture and climate statement: *MSMHS is a safe, respectful and nurturing environment where our professional learning community is committed to 21st century instruction that promotes effort and academic progress by celebrating diversity and believing with the collaboration of all stakeholders that all students will succeed.* The statement "Effort Creates Ability," was also generated and, in addition to accompanying the MSMHS Core Values, Beliefs, and Learning

Expectations, serves as one of the school's key tenets and is prominently displayed in the MSMHS Great Hall.

The MSMHS Core Values, Beliefs, and Learning Expectations were further enhanced with input from the following four stakeholders: administration, students, parents, and teachers. In February of 2012, a parent committee for NEASC was established to allow for parent input. Moreover, the Executive Committee of the Student Council were included for input on the core values. Based on this input, during the summer of 2012, the MSMHS NEASC Committee, with the addition of Janet Allison from NEASC, met for a final revision of the MSMHS Core Values, Beliefs, and Learning Expectations prior to their submission for approval by the LEARN Board of Directors. On October 11, 2012, the LEARN Board of Directors officially approved the MSMHS Core Values Statement and Learning Expectations with a unanimous vote. On October 17, 2012, the statement was presented to the MSMHS Governing Board comprised of area superintendents and the LEARN Executive Director.

MSMHS has challenging and measurable 21st century learning expectations for all students which address academic, social, and civic competencies and are defined by school-wide analytic rubrics that identify targeted high levels of achievement. One hundred percent of teachers state that MSMHS has adopted school-wide analytic rubrics that define all of the 21st century learning expectations and that they are challenging and measurable for all students. Prior to the school's opening in the summer of 2011, MSMHS established a set of challenging and measurable 21st century learning expectations. The 21st century learning expectations were developed by the first group of hired faculty and administration and were revised by the NEASC Committee in the spring of 2012. The Principal approached the faculty with the guiding question, "What skills do we want our students to leave MSMHS with?" Teachers and administrators then

began to brainstorm specific skills necessary for each MSMHS graduate to achieve postsecondary success. These skills were then grouped together based on their relevance to one another and their common themes. The 21st century learning expectations each fall within one of two categories: academic or civic and social.

During the 2011-2012 school year the Core Values, Beliefs, and Learning Expectations were revised. In addition, there was significant revision of the school-wide rubrics created by the planning committee in 2005. Each rubric corresponded to a specific 21st century learning expectation. In the course of revising the school-wide rubrics, the Principal solicited input from parents, students, faculty, and administration. In order to create a more user-friendly document for students, teachers and parents, adjustments in each rubric's language were made. Each rubric has five categories of skill mastery: Beginning, Approaching Proficient, Proficient, Approaching Exemplary, and Exemplary. Each category originally had a specific set of criteria. Arrows replaced the text criteria for Approaching Proficient and Approaching Exemplary, which enabled teachers to more accurately assess students' fulfillment of the criteria in multiple categories. For example, a student may have met criteria for Proficient and some criteria for Exemplary; therefore, the student could be rated Approaching Exemplary. Specific attention was given to the Common Core State Standards and College Readiness Standards; both were considered in the revision of the learning expectations for MSMHS in order to ensure that students were developing the skills necessary for postsecondary success. As a result of this process, and as indicated by the Endicott Survey, 97.9% of students and 95.9% of parents report they are familiar with the 21st century learning expectations adopted by MSMHS; 97.6% of parents understand the level of learning that their child must demonstrate in order to meet the school's

learning expectations and 95.9% of parents and 89.9% of students state that the MSMHS learning expectations are challenging.

Connecticut's recent adoption of the Common Core and College Readiness Standards was integral to the process of defining the MSMHS' 21st century learning expectations. In addition, the faculty also consulted the University of Pittsburgh's Institute for Learning's Principles of Learning to ensure that the MSMHS expectations were challenging, easily communicated, and easily measured. The Principles of Ocean Literacy were considered as they relate to the marine science learning expectation measured by MSMHS Rubric 5. The Next Generation Science Standards were considered in the development of the scientific knowledge expectation, MSMHS Rubric 4, and problem solving learning expectation, MSMHS Rubric 7.

Nine analytic rubrics are used to measure the ten learning expectations. One rubric combines learning expectations nine and ten. Learning expectation ten, *students will meet their civic responsibilities to society and the natural environment*, is measured by students' completion of the requisite community service hours of ten hours a year. When designing the rubrics, Wiggins and McTighe's *Understanding by Design* model was referenced in order to make sure that each rubric was easily integrated into specific course curricula. Professional development surrounding curriculum design was also offered in order to ensure consistency across the content areas and compliance with each 21st century learning expectation. In order for faculty to make sure students were achieving each of the 21st century learning expectations, the rubrics would need to be easily integrated for use alongside course assignments and tasks. Ultimately, faculty and administration believe that students will begin to autonomously integrate these skills and apply these skills to authentic tasks within the classroom and beyond. As a result,

97.9% of students state they are familiar with the school-wide rubrics which teachers use to assess their assignments and classwork.

A student's level of competency towards achieving each of the 21st century learning expectations is measured through the use of a rating ranging from "Beginning" to "Exemplary." The rubrics correlating to each expectation are used to rate a student's performance on specific assignments or tasks, as noted within each unit within the curriculum. For example, a teacher may assess a student's level of competency on Rubric 7, Problem Solving, as demonstrated by his or her completion of a laboratory experiment within a science course. In addition to rating a student's overall proficiency on a rubric, faculty may choose to focus on specific criteria within each rubric to increase a student's level of competency. For example, a teacher may choose to assess a student on his or her ability to revise and edit written work using the Revising and Editing criteria within Rubric 1, Communication.

The MSMHS Core Values, Beliefs, and 21st Century Learning Expectations are actively reflected in the culture of the school, drive curriculum, instruction, and assessment in every classroom, and guide the school's policies, procedures, decisions, and resource allocations. The school's core values, beliefs, and learning expectations have served as a driving force within the school culture and climate from the school's opening and 100% of staff on the Endicott Survey state that the MSMHS Core Values and Beliefs about learning guide decisions related to policies, procedures, and the allocation of resources. In addition, 96.8% of staff report that they consider the school's core values and beliefs about learning when making important decisions.

The core values, beliefs, and learning expectations are posted in every classroom within the school; communicated regularly to students at the beginning of lessons and units, on specific assignments within classes; and referenced regularly during the school day. In addition, course

curricula are coordinated so students are assessed on each of the 21st century learning expectations multiple times before they graduate. As a result, 98.7% of students report they are familiar with the MSMHS learning expectations (academic, social, and civic); 100% of staff state that the school's core values, beliefs, and 21st century learning expectations are clear to them.

MSMHS staff have received specific professional development focused on the incorporation of the learning expectations into course curricula and have participated in the revision process for the learning expectations and corresponding school-wide rubrics. An overwhelming majority of parents, 97.6%, also state that the MSMHS Core Values, Beliefs, and Learning Expectations are referenced at parent meetings/conferences. Moreover, 97.6% of parents report that the learning expectations are clear to their son/daughter. In addition to parent meetings/conferences, the MSMHS core values, beliefs, and learning expectations can be found on the school's website, as well as in the Parent-Student Handbook, which each family receives at the beginning of the school year.

All staff at MSMHS, 100%, state the core values and beliefs are actively reflected in the school's culture. Staff, students, parents, and community partners of MSMHS refer to themselves collectively as the "MSMHS Family," reinforcing the idea that family members take responsibility for their actions and value each other. The school's "safe, respectful and nurturing environment," reinforced by a zero-tolerance policy for bullying, is upheld by both teachers and students who report negative and mean behavior. Each year, all of the school's stakeholders—faculty, students, parents, staff, and community partners—sign an Anti-Bullying Pledge which is then displayed in the school's Great Hall. Because of the close-knit community and its small size, the Principal uses Great Hall meetings to communicate with the entire student body

whenever there is a school-wide issue or event. Great Hall meetings occur at least twice a week, and many students and faculty equate it to a family gathering. Furthermore, MSMHS schedules Advisory meetings on Tuesday and Friday mornings throughout the school year. Each student is paired with an academic advisor so that students have another adult in the school, in addition to their school counselor, with whom they feel comfortable speaking. The advisor is also a primary contact for home as well as teachers and contacts students' families at least once a quarter.

Academic rigor and a challenging curriculum are also key tenets within the school's core values. All courses are designed to help students prepare for college. This is reflected in the variety and number of Advance Placement (AP) and Early College Experience (ECE) courses available to students. Students also have access to an ECE course in their sophomore year. The school's course offerings are changed to meet the needs of university requirements as well as student interest.

In order to reach a broad spectrum of students, MSMHS has adopted a variety of instructional and assessment methods in order to ensure that students are achieving to the best of their ability. MSMHS primarily uses a co-taught teaching model for the delivery of its special education services so that students receive quality content instruction. This model also guarantees that students' Individualized Education Plans (IEPs) are implemented appropriately. There are three Seminar in Academic Methods classes that focus on one of three areas: literacy, mathematics, and organization/study skills. These academic support classes further assist in ensuring personalization of student instruction and supporting students in their identified area of need.

MSMHS consistently collaborates with all stakeholders as evidenced through the commitment to the incorporation of all stakeholders in school decisions. Collaboration guides

every major decision at MSMHS. The Parent Teacher Organization (PTO) plays an active role in daily activities at MSMHS, holding fundraisers, helping to start school sports such as fencing and crew, as well as assisting students in need through the acquisition of school supplies and in some cases, internet access at home. The Principal's Advisory Council, comprised of school faculty and administration, meet monthly to discuss a range of issues, such as the implementation of the common grading policy. The Principal additionally chairs two School Improvement Committees; one comprised of students and another comprised of parents. These committees allow students and parents to voice their opinions with regard to school policy. For example, the decision to implement midterms prior to winter break each year was the unanimous recommendation of all three committees.

Furthermore, the Principal is the advisor for the Diversity Team that addresses issues affecting the school's culture and climate. For example, in 2014, the Diversity Team created the "Just Stop" campaign in response to culturally insensitive comments students reported hearing within the MSMHS community. For concerns related to individual students, MSMHS follows a Scientific Research-Based Intervention roadmap which incorporates input from teachers, administration, parents, and students to create a Student Intervention Plan (SIP) for each identified student. The SIP addresses academic, behavioral, and emotional concerns or difficulties. Decisions surrounding the education of students receiving special education services and 504 plans are also conducted as the result of a collaborative effort between school staff, parents, the student, and representation from the student's sending district.

As previously stated, "Effort Creates Ability," continues to serve as one of the school's key precepts. MSMHS believes that if students put forth effort then they will be able to achieve success in their endeavors, both in and out of school. The implementation of a school-wide late

work policy during the 2015-2016 school year further supports the idea that if students put forth the effort to complete assignments, even if they are late, they will be successful in developing the skill or learning the content associated with it.

Another area where student effort is recognized is the AP/ECE class appeals process. At MSMHS students are required to have a teacher recommendation in order to enter an AP/ECE level course. However, if a student does not obtain the teacher recommendation and the student and the parents believe their son or daughter has the ability to do well in a particular course, the student may appeal the decision. Students must first write a letter to their school counselor explaining why they want to take the course; why they request an exception; and why that exception should be granted. Once the student has submitted the letter, the school counselor and advisor gather relevant data from the teachers. Then the counselor and advisor evaluate the information and determine if admission should be granted. If necessary, the student and parent can meet with the Principal for a final appeal, and the Principal makes the final determination. To date, the principal has never denied access to an AP and/or ECE course where the student and parent have expressed a desire to accept the challenge of an upper level class.

MSMHS also provides students with opportunities to develop the skills and character needed to be active and responsible citizens in a global community, foundational to the school's core values, beliefs, and learning expectations. MSMHS offers a senior internship course that allows students to explore career opportunities. Internships are personalized to meet the student's interest. For example, seniors interested in entering the teaching profession have served as teaching assistants within the building, and at the Montessori School in Old Saybrook, one of the school's community partners. Another senior student who was interested in becoming a marine biologist completed an internship with Mystic Aquarium.

In addition to being reflected in the school culture, the core values, beliefs, and learning expectations are actively reflected in decisions and practices regarding curriculum, instruction, and assessment. All curricula are coordinated so that students are consistently assessed on each of the school's 21st century learning expectations; each course incorporates the school-wide rubrics several times throughout the course of study. In addition, the assured learning experiences and unit tasks embedded in the curricula are explicitly aligned with the learning expectations as well. Within any given unit of study, teachers use a variety of formative and summative assessments to evaluate students, differentiating to meet each student's ability level, and to assess individual strengths and weaknesses.

The commitment to the MSMHS Core Values, Beliefs, and Learning Expectations is also evident in the school's policies, practices, and resource allocations. In order to promote collaboration both within and across departments, MSMHS adopted the practice of Professional Learning Communities (PLCs) and Interdisciplinary Professional Learning Communities (IPLCs), allocated time during the school week for teachers and administration to collaborate and engage in professional discourse. This time may be used for curriculum revision, Learning Walks (structured best-practice peer observations), assessment creation, and the calibration of common grading practices through the use of the Stanford Calibration Method. Several teachers grade the same piece of student work, using a rubric and a scoring guide. Teachers then discuss their grade as well as their proficiency rating for the student work sample, calibrating a reasonable and consistent review.

In order to promote the safety of all students and staff, teachers are trained in safety procedures at the beginning of each school year during the professional development days preceding student arrival. In addition, each school year special education teachers and

intervention specialists are trained in Safety Care restraint procedures. In order to ensure the consistent revision of curriculum and instructional practices, time is allocated each month during PLCs and IPLCs. To promote student achievement of skills, the school-wide late work policy was implemented during the 2015-2016 school year.

The allocation of resources at MSMHS further supports the school's core values, beliefs and learning expectations. Funds were allocated for teachers to attend a Curriculum Institute during the summers of 2014 and 2015. There is Crisis/Safety Team and Anti-Defamation League training in order to ensure that students and staff feel safe physically, mentally, and emotionally. The professional development on incorporating Accountable Talk, Bloom's Taxonomy Higher Order Thinking, and Active Learning in the classroom, all foster continuous improvement in instructional practices. The addition of the school's Literacy Support Teacher provides students access to accurate and current research and resources. Utilizing technology in and outside the classroom is promoted. Each student receives a laptop which is updated and maintained as needed. Each classroom contains a Promethean board; and each science lab is outfitted with up to date equipment. The school features five bridge simulators and an aquaculture lab to support the marine science theme and instruction as well. Finally, depending on student and staff need, additional personnel have been hired to implement specific interventions and support students develop academic skills. For example, in the 2014-2015 school year, an SRBI Instructional Assistant position was created and filled to address the expressed need for specific literacy interventions and support.

MSMHS regularly reviews and revises its core values, beliefs, and 21st century learning expectations based on research, multiple data sources, as well as district and school community priorities. Currently there is a five year revision plan in place for the MSMHS Core Values,

Beliefs, and 21st Century Learning Expectations. Over this five-year period, two learning expectations will be reviewed and revised each year, culminating in an overall review at the end of each five-year cycle. Revisions are based on input from students, parents, teachers, and administration, as well as the MSMHS Governing Board. Using feedback from community partners, MSMHS learning expectations may be revised to reflect post-secondary demands. In addition, as teachers continue to use the rubrics within their classrooms, teachers and students may make suggestions for changes which might also be used to revise a rubric or learning expectation. For example, the Marine Science rubric, MSMHS Rubric 5, proved problematic in practice. Therefore, the rubric was reviewed and revised during both the 2013-14 and 2014-15 school years. Because the school is just entering its fifth year, there will be an overall review and possible revision at the end of the 2015-2016 school year.

When determining what revisions need to be made to the school-wide rubrics, staff at MSMHS consult data sources indicative of student's academic progress. For example, standardized test data, such as the Connecticut Mastery Test (CMT), ReadStep, Connecticut Academic Performance Test (CAPT), Measures of Academic Progress (MAP), PSAT 8/9, PSAT, and SAT, has been consulted when looking at Rubric 1: Communication, Rubric 3: Mathematics, and Rubric 4: Scientific Inquiry. Additional forms of data considered in the review and revision of the school's core values, beliefs, and learning expectations include: Student Success Plan data, Scientific Research-Based Intervention team data, Special Education data, and school-wide as well as individual progress towards achieving the school's 21st century learning expectations.

When reviewing and revising the school's core values, beliefs, and learning expectations, various pieces of educational research are also considered. Bloom's Taxonomy was the key

consideration when examining the school's 21st century learning expectations. When reviewing the Marine Science and Scientific Inquiry rubrics, the Principles of Ocean Literacy and Next Generation Science Standards (NGSS) were considered. The University of Pittsburgh's Principles of Learning and the *Understanding by Design* research by Wiggins and McTighe are continually referenced to ensure that the MSMHS Core Values, Beliefs and 21st Learning Expectations are fully integrated into the course curricula and instruction, and easily communicated to students and parents.

In the revision of the school's core values, beliefs, and 21st century learning expectations, the skills needed for postsecondary success is the primary focus. MSMHS staff continually look at where graduates have gone and where they hope to be after graduation. In addition, MSMHS continually receives input from graduates and parents to see how to better prepare students for postsecondary success. According to student interest surveys, the top five most popular prospective careers at MSMHS are education, criminal justice/forensics, the medical field, psychology, and marine science. Graduates of MSMHS have enrolled in a variety of postsecondary institutions including the United States Coast Guard Academy (USCGA), University of Connecticut, University of Virginia, Duke University, Bates College, Providence College, State University of New York Maritime College, University of Miami, and Rochester Institute of Technology. In the history of MSMHS, 99% of graduates have enrolled in two or four year colleges/universities. When consulting community partners for their input in the creation of the core values, beliefs, and 21st century learning expectations, MSMHS primarily consulted the USCGA and the Southeastern Connecticut marine industry to see what MSMHS could do to support the industry as a whole. Some of the businesses and partners consulted included Mystic Aquarium, Mystic Seaport, University of Connecticut, and USCGA. Therefore, the MSMHS

Core Values, Beliefs and Learning Expectations are always revised with the goal of helping students to be successful at any postsecondary institution or career path.

EXECUTIVE SUMMARY

Marine Science Magnet High School has fostered a dynamic and inclusive process for designing and implementing the school's core values and 21st century learning expectations. The school community, including students, teachers, parents, school administration and community partners, has embraced the school's core values and 21st learning expectations and are active members in their revision process. The school community works diligently to ensure that the school's core values are actively reflected in all aspects of the school's culture and climate. The school staff has ensured that the 21st century learning expectations are embedded throughout the school curricula, instruction, and assessments. The implementation and opportunities for practice of the identified core values and 21st century learning expectations will continue to prepare students for success in post-secondary endeavors.

MSMHS has identified challenging 21st century learning expectations for all students which address academic, civic, and social competencies. In addition, school-wide analytic rubrics have been created and are being implemented across all curricula. School staff have also cross-referenced curricula to ensure that all students, regardless of which courses they take, have multiple opportunities for practice.

The school has created, and will be implementing, a five year revision process for its core values and 21st century learning expectations. This process also allows for intermediate revision as needed based on feedback from the school community.

Based on the NEASC Committee on Public Secondary Schools (CPSS) Rating Guide for the Standard on Core Values and Learning Expectations, MSMHS judges its adherence to the Standard as **EXEMPLARY**.

Strengths:

1. The dynamic and inclusive process for revisiting the core values, beliefs, and learning expectations
2. The challenging and measurable 21st century learning expectations for all students which address academic, social, and civic competencies, and are defined by school-wide analytic rubrics that identify targeted high levels of achievement
3. The established process for involving all stakeholders in the creation and revision of school policies and resource allocation
4. The student ownership of the school's positive culture and climate
5. The core values ingrained in the school's culture demonstrated through the School Improvement Committees, the Principal Advisory Council, the Diversity Team, the Parent Teacher Organization, and the SRBI Team
6. The close alignment of the school-wide analytic rubrics to the 21st century learning expectations
7. The parent and student familiarity with the school-wide rubrics
8. The purposeful and consistent use of the school-wide rubrics within each course
9. The alignment of all course curricula to ensure the assessment of all 21st century learning expectations
10. The school-wide measurement of every student's competency of the 21st century learning expectations
11. The inclusion of all stakeholders in the revision process for the core values, beliefs, and 21st century learning expectations

12. The prominent display of the core values, beliefs, and learning expectations throughout the school building
13. The universal adoption of the school's motto "Effort Creates Ability"

Needs:

1. Ensure the consistent use of each of the school-wide rubrics throughout each school year for all students
2. Practice the Stanford Calibration Method of all school-wide rubrics interdepartmentally
3. Develop and implement a scheduled process to review and revise all school-wide rubrics every five years

MARINE SCIENCE MAGNET HIGH SCHOOL 2016 SELF-STUDY REPORT



STANDARD 2: *CURRICULUM*

RATING: EXEMPLARY

Standard 2: Curriculum

NARRATIVE

The MSMHS curriculum is purposefully designed to ensure that all students practice and achieve each of the school's ten 21st century learning expectations. Each individual course has taken responsibility for reporting progress on multiple learning expectations to ensure that these expectations are all taught, assessed, and reported to students and parents. These responsibilities are listed after each course in the program of studies. For example, in the heterogeneous course English I, all freshmen focus on the MSMHS 21st century learning expectations of reading and writing effectively for a variety of purposes, MSMHS Rubric 1, and speaking effectively with a variety of audiences in an accountable manner, MSMHS Rubric 2. In Geometry, students focus on the MSMHS 21st century learning expectations of employing mathematical problem-solving skills effectively, MSMHS Rubric 3, and making decisions and solving problems in independent and collaborative settings, MSMHS Rubric 7. In the common curriculum template used school-wide, each course also documents which 21st century learning expectations will be taught. New courses are added to the program of studies based on student interest and relevance to 21st century learning expectations.

The Endicott Survey indicates that 100% of staff believe the school's formal curriculum design ensures that all students practice and achieve all of the school's learning expectations. The Guidance Department issues a biannual competency report to inform students and families of individual progress in meeting the 21st century learning expectations. On this report, progress for each 21st century learning expectations as measured by school-wide rubrics is reported in a table, along with a current average of where the student stands in meeting proficiency. This consistency in informing families of student progress with regard to meeting

the 21st century learning expectations resulted in 94.3% of parents in agreement that the curriculum provides their child with opportunities to achieve the school's learning expectations, as reported by the Endicott Survey. Additionally, MSMHS posts a compiled list of student averages in each rubric by grade level on the school's website to which all stakeholders have access. This list, posted annually, shows growth in students' proficiency for each 21st century learning expectation.

In an effort to further link the curriculum and the 21st century learning expectations, the school created a process for students to reflect on their progress on 21st century learning expectations in a Senior Graduation Portfolio. In May of senior year, each student compiles a portfolio that demonstrates his or her proficiency in all 21st century learning expectations. During their presentation to a panel of three or four adults, students provide two pieces of evidence showing proficiency for each MSMHS 21st century learning expectations. The committee is comprised of administrators, teachers, and other staff who review the senior portfolio and presentation to determine whether or not the student is eligible to graduate.

All MSMHS curriculum is written in a common format that includes units of study with essential questions, concepts, content and skills, the school's 21st century learning expectations, instructional strategies, unit tasks, and assessment practices that include the use of school-wide analytic and course-specific rubrics. MSMHS utilizes the template based on *Understanding by Design* (Wiggins and McTighe 2005) and *A Guide for Using Webb's Depth of Knowledge* (Hess 2013). As indicated by the Endicott Survey, 100% of staff are familiar with this template and 90.2% of parents feel they are informed about the school-wide learning expectations in their child's classes. A curriculum template was developed during a summer professional

development called the Curriculum Academy, organized by the LEARN district in June and July 2014 and further revised during the 2015 Curriculum Academy. At this academy, faculty from the Science, Social Studies, Language Arts, Math, and Special Education Departments, together with administration, worked with curriculum experts to write and/or revise curricula. Faculty members who attended then trained those who were unable to participate. The common format includes: essential questions, enduring understandings and unit goals, standards (Common Core, subject-specific state standards), 21st century learning expectations, unit content overview, learning objectives, assured learning experiences (including differentiation and interdisciplinary connections), unit tasks with their corresponding school-wide rubrics, and formative and summative assessments. Each course is responsible for incorporating multiple 21st century learning expectations into the curriculum.

Assured learning experiences, including formative and summative assessments, and unit tasks, are outlined in each curriculum document. A variety of strategies and assessment formats are included to meet the needs of all types of learners. These assured learning experiences are guaranteed for all students, regardless of the course in which they are enrolled. These experiences include hands-on learning activities, teacher lecture, student-centered options, cooperative learning activities, and common assessments.

Teachers in each academic department meet routinely to revise curriculum, review the use of school-wide and course-specific rubrics, and share effective instructional strategies. During weekly Professional Learning Community (PLC) time, staff discuss students' performance and progress on curriculum. Changes are made to the curriculum based on these discussions, professional development, and developments with or updates to the Common Core and State Standards.

The MSMHS curriculum emphasizes depth of understanding through inquiry, problem solving, and higher-order thinking in all classrooms; provides authentic, cross-disciplinary learning experiences both in and out of school, and fully supports the informed and ethical use of technology. The curriculum is written to include daily lesson objectives that support higher-order thinking in all courses. Objectives are written in a common format and are displayed and referenced at the start of each class. Projects and science labs are designed to support inquiry and problem solving in the classroom. According to the Endicott Survey, 100% of teachers agreed that the curriculum emphasizes depth of understanding and application of knowledge. Students' skills in these areas are assessed using three of the school's nine school-wide rubrics; Scientific Inquiry, MSMHS Rubric 4; Marine Science, MSMHS Rubric 5; and Problem Solving, MSMHS Rubric 7. All school-wide rubrics are used frequently and student performance is tracked in a school developed database. Furthermore, MSMHS classes encourage inquiry, problem solving and higher-order thinking, including 15 Advanced Placement (AP) and Early College Experience (ECE). In the 2015-2016 school year, 93% of seniors and 83.2% of all MSMHS juniors and seniors are enrolled in at least one AP or ECE course. An additional 21 sophomore students have been approved for an ECE course in 2015-2016 school year. The Endicott Survey reported that 95.8% of students agree that courses challenge them.

The MSMHS curriculum is designed and written to include interdisciplinary connections, and the school's marine science theme is evident in all classrooms. Teachers make a conscious effort to connect their lessons to marine science in order to emphasize the student's application of knowledge. Two courses offered at MSMHS, ECE World Maritime History and Honors English II, were written collaboratively in an effort to meld the two disciplines. Students who are enrolled in these courses gain content knowledge in World Maritime History and then hone their

reading and writing skills in Honors English II. The teachers work together to identify specific novels, organize field trips, and create research projects that support both subject areas. This curriculum is unique to MSMHS as it replaces a general World History survey course. Cross-curricular collaboration is evident in other courses as well, and supported in the Endicott survey: 93.3% of students report that teachers use topics from other subjects, and 89.5% of students agree that teachers explain how content applies to other courses. Additionally, 100% of teachers agree that the curriculum emphasizes cross disciplinary learning.

MSMHS is focused on creating authentic learning experiences for all students both inside and outside of the school building. The school has worked diligently to design and incorporate tasks, projects, and field trips into all course curricula. As indicated in the Endicott Survey, 100% of teachers agree that the curriculum emphasizes authentic application of knowledge and skills. MSMHS has a state-of-the-art aquaculture lab on site. Students from all grades utilize the aquaculture lab to apply their skills and content knowledge of marine science in a working facility. The students are involved in all aspects of the aquaculture lab in order to ensure the facility runs at the highest standard. In addition, most courses have field trips integrated into their curriculum. Regular trips are made to Project Oceanology, Bluff Point State Park, Mystic Aquarium, and Mystic Seaport that support specific learning in the classroom. Partnerships with local institutions have also provided students with unique opportunities outside of the school day. In partnership with the University of Connecticut, high-achieving students have been selected for the Marine Scholars program that allows them to attend lectures, work collaboratively with UConn students, and serve as an intern in a research lab with university faculty. At the Mystic Aquarium, students become docents, intern with professionals, and attend seminars. As reported

on the Endicott Survey, 89.9% of students agree that MSMHS provides opportunities for learning off-campus.

MSMHS is a 1:1 device school that provides each student with a laptop computer to use throughout his or her four years at the school. In order to support this initiative, MSMHS curricula extensively provides students with knowledge on the ethical use of technology. The Civics curriculum was reorganized in 2014 to include a unit that addresses the appropriate and responsible use of technology. During advisory, students discuss technology use and talk about what it means to be a digital citizen in the 21st Century. Every year, the Principal gives a presentation to the entire student body about cyber bullying. This presentation is also given to the PTO and all stakeholders sign a “No Bullying Pledge” that can be seen on display in the Great Hall. Teachers design specific activities, such as web quests and video creation to utilize the technology in the classroom and designate time to utilize the library media center. Students’ skills are assessed with the use of MSMHS School-wide Technology Rubric, MSMHS Rubric 6. The Endicott Survey reports that 100% of teachers agree that the curriculum emphasizes the informed and ethical use of technology. This is supported by the fact that 98.7% of students agree that they are knowledgeable about the ethical use of technology.

There is clear alignment between the written and taught curriculum. According to the Endicott Survey, 100% of staff report that the written and taught curricula are aligned, as well as emphasizing inquiry, problem-solving, and higher-order thinking within the classroom. Additionally, administration designates common planning time for each department within PLCs to ensure that issues with curriculum are addressed, common assessments are coordinated, and monthly lesson plans are aligned. Monthly lesson plans are submitted to administration to ensure that curriculum is accurately implemented, as well as to assist teachers in planning and

coordinating instruction within departments. Interdisciplinary Professional Learning Communities (IPLCs) meet to share planned curriculum and coordinate interdisciplinary learning. Staff meet with administration at the beginning of each year to review revised curriculum.

Curricular coordination and vertical articulation is extensive between and among all academic areas within the school and is strategic in coordination with sending schools and districts. As a regional magnet school, MSMHS receives students from 30 sending districts in Eastern Connecticut. This collection of sending districts presents a challenge with curriculum coordination between MSMHS and sending districts. In order to minimize this issue, all MSMHS freshmen are placed in heterogeneously grouped courses. This allows the faculty to effectively assess the skills of each student. The curriculum is reviewed on monthly cycles during PLC and IPLC meetings and culminates in an annual review with the administration. MSMHS views curriculum as a living document and teachers revise curriculum during monthly and annual reviews. The LEARN district provided curriculum writing training during the summer of 2014 and 2015 to adopt research-based methods in curriculum design. From these summer Curriculum Academies, a common curriculum template has been adopted by all faculty at MSMHS.

The faculty spends one planning period per month, approximately 84 minutes, on curriculum review. During these meetings, PLC members discuss the previous unit and the necessary changes to the curriculum for the following year. Each month during morning meetings with the IPLC, staff members share current and upcoming topics in their curriculum. These topic shares provide opportunities for teachers to make connections within their daily lessons to other subjects in the school and promote collaboration between disciplines on common

content. Curriculum mapping from the 9th to 12th grade has been deliberately implemented within the subject areas. The language arts, mathematics and social studies departments worked with the LEARN Common Core coaches to align the MSMHS curriculum to the newly adopted Common Core standards. Each department worked for three full-day sessions to vertically articulate its courses. The result was the conscious plan to develop 21st century skills and content based skills. In addition, as a department, these teachers were involved in the curriculum development of all the courses in their subject area which allows them to support the progression of student skills throughout their high school career. The world language department works extensively to write and revise the curriculum for the five levels of Spanish curriculum. The science department is working towards vertical articulation and faculty members have been working during department meetings to identify curriculum overlap. The number of science course offerings has grown from three offerings in 2011-2012 to 21 offerings in 2015-2016. Additionally, a science coach was hired in 2015 to assist teachers in curriculum coordination and vertical articulation.

MSMHS makes conscious efforts to work with sending districts on coordinating its ninth grade curriculum to support the needs of incoming students. Strengths and weaknesses in content knowledge are identified by school counselors, content teachers, and special education teachers using data from CMT results, universal screening and PPT/504 meetings. These data are used to identify areas of focus in the curriculum to meet the needs of the students. To increase awareness of MSMHS programs among the sending districts, the MSMHS school counselors hosted regional luncheons for school counselors of eligible 8th grade students. In addition, MSMHS frequently meets with postsecondary faculty of Roger Williams University, SUNY Maritime Academy, University of Connecticut, University of Rhode Island, and United States Coast Guard

Academy. The goal of these meetings was to identify the overall weaknesses of incoming college freshman and develop strategies that MSMHS could implement to ensure college readiness.

Overall the staffing, instructional materials, technology, equipment, and facilities at MSMHS are more than adequate to implement the curriculum as well as co-curricular programs. Class sizes vary, with an average of 14 students, and a student-to-teacher ratio of 11:1. Instructional materials provided are exemplary across learning areas. In March of each year, teachers submit a supply request form for review by administration. Most, if not all, materials are provided to teachers the following year. In order to complement the theme of the school, all requests for science equipment have been approved. MSMHS spent \$157,000 on materials in 2013 to outfit all science labs. When there are items that cannot be funded, administration meets individually with the requesting teacher to discuss other options. There is never a shortage of consumables for teachers. MSMHS annually spends approximately \$400,000 on instruction-related expenses. Each teacher is provided a new laptop every four years with software updated yearly.

Every classroom is equipped with a Promethean board. There are ample work stations for each student in any given classroom. MSMHS has spent \$55,000 for library furniture, equipment, and technology. In addition, our library maintains 15 touch-screen computers and five scanners. Science labs are equipped with state-of-the-art technology. Students learn how to use current instrumentation and apply that knowledge in the field or in the aquaculture lab. The MSMHS aquaculture lab is also a state-of-the-art facility, outfitted with the capacity to hold 20,000 gallons of water in 50 tanks. The aquaculture lab can support aquatic organisms from all over the world in a closed environment. Students are an integral part in the maintenance of the

lab and work side by side with aquaculture staff on a daily basis. MSMHS also has five bridge simulators which are used to teach students how to drive and navigate nautical vessels. It can simulate local waters and over 20 different vessels, providing students direct exposure to the marine transportation industry. The students use the simulator to practice their skills while obtaining their Connecticut DEEP safe boating license. Science AP and ECE classes have technology available for higher-level lab experiences. The classroom/lab design allows for seamless transition between instruction and lab activities. The math department has graphing calculators for student use while in school. Each student is required to have a personal graphing calculator. For students who are unable to purchase one because of financial difficulties, the PTO funded principal discretionary fund is used.

All students are provided with a laptop upon entering high school to keep for the duration of their attendance at MSMHS. The school purchases a warranty for each laptop that includes software, hardware, and accident protection. The textbooks provided to students are in excellent condition. The Endicott Survey indicates 98.7% of students responded “My school provides me with the instructional materials I need for each of my classes,” and 94.3% of parents reported “my son/daughter has been provided with the materials needed for each class.” According to the Endicott survey, 96.7% of parents think the school’s technology is adequate and 91.1% agree that the school’s facility supports MSMHS programs.

The resources of the library/media center are sufficient to support the curriculum. The school was originally designed to have all paper-less technology and utilize all online databases. MSMHS recognized this reliance on technology as a weakness and has recently designated space for a library in the school. The library was started at the beginning of the 2014-2015 school year, and \$14,000 is allocated annually for continuous library improvements.

MSMHS is currently increasing the collection of hard copies of resources. In addition, students have access to online resources through databases such as EBSCOhost, ProQuest, ScienceDirect, and iCONN. The library, situated on the second floor, is centrally located. The library, open and accessible, is surrounded by classrooms. Teachers have the ability to seamlessly send students to and from the library to complete work. This maximizes student and teacher access and 83.2% of students feel that “teachers assign work that requires me to use information and do research in the library/ media center.” Stationed at the far end of the library is the MSMHS Green Table, donated by the parents of a 2015 graduate, designed after the Philip Exeter Academy’s Harkness Table. This table is utilized by classroom teachers during whole-class discussions to increase student interaction and foster Accountable Talk. In the Endicott Survey, 83.8% of parents report that the “library and media resources adequately support learning in my son’s/daughter’s classes.”

MSMHS has a variety of co-curricular offerings including 15 clubs and four competing teams (fencing, dance, debate, and ocean science bowl). Funding to implement programs is often provided by the PTO. For example, PTO has allocated funding for fitness club, debate team, and fencing team equipment, as well as stipends for unity club (GSA) guest speakers. The school budget includes subsidies for registration fees and transportation for club field trips. In the Endicott Survey, 100% of the staff agree that “co-curricular programs are adequately funded,” “the facilities support implementation,” “have sufficient instructional materials,” and “have sufficient professional staff” to “implement the curriculum including co-curricular programs, and other learning opportunities.”

The district provides the school’s professional staff with ample personnel, time, and financial resources for ongoing and collaborative development, evaluation, and revision of the

curriculum using assessment results and current research. All departments align their curricula to the Common Core State Standards (CCSS). The science department utilizes Next Generation Science Standards (NGSS) and the Connecticut State Science Standards (CSSS) in the development of its curriculum. Additionally, the social studies department uses the C3 Framework from the National Council for Social Studies in writing standards; members also attended a conference on the new Connecticut Elementary and Secondary Social Studies Frameworks in the Spring 2015. Lastly, MSMHS has a variety of AP and ECE courses. These courses have standards and curricula that are further aligned to the host university programs.

Currently, teachers meet within their PLCs throughout the school year and attend Curriculum Academy sessions during the summer. The Curriculum Academy focuses on developing a school-wide format as well as clearly articulated learning goals and objectives. Each year, \$25,000 is allocated for the purpose of curriculum writing. Within PLC groups, curriculum review is scheduled at least once per month. PLC groups collaborate with Common Core coaches, synthesizing lessons with state standards to ensure effective communication and revision. MSMHS utilizes Common Core coaches to formally review curriculum throughout the year. All PLCs meet with administration to review curriculum on a regular basis. In these meetings, respective departments reviewed and re-aligned school curriculum in accordance to the Common Core State Standards, ensuring that units and lessons remain in accordance to said standards.

There are several opportunities within the curriculum for teachers to use student performance data to guide continued growth. PLCs compile and review assessment data every month and discuss strategies to improve and align instruction in response to the data. Teachers also set annual Student Learning Objectives (SLOs) based on Academic Competencies that are

embedded within their respective curricula. A midyear review of collected data based on these SLOs drives adjustments in instruction with the goal of improving student performance to meet end-of-year goals. The science department works collaboratively to design curricula that utilizes data from the Science Connecticut Academic Performance Test (CAPT). Students are administered a practice CAPT exam during their freshman year. The results of this exam are analyzed by science department teachers and administration. Teachers use the results to target skills needed to improve student performance on the state CAPT exam taken in the spring of their sophomore year. Additionally, all sophomore students take the PSAT exam, from which the administration analyzes results to assess student mastery of skills in preparation for the SAT exam administered during their senior year. For the 2015-2016 schoolyear, MSMHS is preparing to administer the state mandated SAT assessment to all junior students. SAT prep data is utilized by the language arts PLC to support and prepare students when they take the exam.

According to the Endicott Survey, 96.8% of staff believe that teachers have sufficient time to engage in formal curriculum evaluation, review, and revision work. In addition, 96.8% of staff feel that they are directly involved in curriculum evaluation, review and revision work. Each year, LEARN is provided state grants to provide common core coaches for schools within the district. Distribution of these sessions is provided by LEARN, including sessions to the departments of English, social studies and mathematics. Extra sessions that are not provided by LEARN are funded by the school to ensure that all staff receive adequate time for curriculum review and revision. Teachers engage in curriculum work during PLC meetings, common planning time, professional development, and formal consultation meetings. Within the building, curriculum revision is an ongoing process, which is supported financially by both the LEARN district and MSMHS.

EXECUTIVE SUMMARY

The MSMHS curriculum is purposefully designed to ensure that all students practice and achieve each of the school's ten 21st century learning expectations. The Program of Studies lists each individual course, as well as the 21st century learning expectations that the course is responsible for teaching, assessing, and reporting results. The Counseling Department issues a competency report twice a year to inform students and families of individual progress in meeting the 21st century learning expectations. In their senior year, students demonstrate their proficiency in the 21st century learning expectations as they reflect, write, and present a Senior Graduation Portfolio to a selected panel made up of an administrator, school counselor, and advisor or teacher.

All MSMHS curricula are written in a common format that includes units of study with essential questions, concepts, content and skills, 21st century learning expectations, and instructional strategies. Each unit also contains assured learning experiences which feature unit tasks, as well as formative and summative assessment practices. These assessments often incorporate the use of school-wide analytic rubrics and course-specific scoring guides. This curriculum template was created during LEARN's Curriculum Academy. Teachers also meet in their PLCs throughout the year to revise curricula as needed.

The MSMHS curriculum emphasizes a depth of understanding through inquiry, problem solving, and higher-order thinking in all classrooms. The curricular objectives support higher-order thinking, and science labs and projects promote inquiry and problem solving. The curriculum also provides authentic, cross-disciplinary learning experiences both in and out of school. Currently, all teachers make a conscious effort to connect their lessons to the theme of

marine science. MSMHS is a 1:1 device school, providing each student with a laptop computer. Teachers instruct students on the ethical use of technology.

The school's written and taught curricula are clearly aligned. This alignment is supported by scheduled common planning time during PLCs and monthly cross-curricular discussions during IPLC meetings. Additionally, monthly lesson plans are submitted to administration.

Curricular coordination and vertical articulation extend through all content areas within MSMHS, and are coordinated with sending schools and districts. Although MSMHS is a regional magnet school with 30 different sending districts, which poses a challenge to curriculum coordination, MSMHS places all freshmen in heterogeneously grouped courses and works very closely with the sending districts to support the needs of all incoming students. Curriculum mapping from 9th to 12th grade has been deliberately adopted within the subject areas. Additionally, the curriculum at MSMHS is regularly reviewed and revised during common planning time.

The staffing, instructional materials, technology, equipment, and facilities at MSMHS are more than adequate to implement the curriculum as well as the school's co-curricular programs. MSMHS has an average class size of 14 students and the instructional materials provided to teachers are exemplary. Each student and teacher is provided with a laptop with software that is updated yearly. All classrooms are equipped with a Promethean board and many classrooms include touch screen desktop computers. There are ample work stations for each student in any given classroom. MSMHS has a state of the art aquaculture lab, and five bridge simulators which are used to teach to students how to drive and navigate nautical vessels. The school was originally designed to use digitally-based media for research. In 2014, the administration initiated a redesign to accommodate the addition of a more robust library media center. MSMHS

also has a variety of co-curricular offerings. The school budget includes funding for registration fees and transportation for all club field trips.

The district provides the school's professional staff with ample personnel, time, and financial resources for ongoing and collaborative development, evaluation and revision of the curriculum using assessment results and current research. As a result, the staff at MSMHS are significantly involved in curriculum development. There are several opportunities within the curriculum for teachers to use performance data to guide continued student growth, and the school regularly uses research to influence ongoing curriculum development.

Based on the NEASC Committee on Public Secondary Schools (CPSS) Rating Guide for the standard on Curriculum MSMHS judges its adherence to the standard as **EXEMPLARY**.

Strengths:

1. The written curriculum closely aligned with the taught curriculum
2. The course offerings based both on student interest and proficiencies outlined by 21st century learning expectations
3. The culminating use of school-wide rubrics as demonstrated in the required graduation portfolio
4. The curriculum written in a common format
5. The resources and professional development available for curriculum revision
6. The time allotted for curriculum revision during PLCs
7. The funding available for staff to write and revise curriculum
8. The opportunity for interdisciplinary curriculum development in IPLC
9. The pairing of school-wide rubrics with specific tasks

10. The commitment by each academic discipline to address specific 21st century learning expectations within their courses
11. The alignment of the curriculum with state, federal, and content specific standards
12. The percentage of juniors and seniors enrolled in a AP/ECE course
13. The influence of institutions of higher education on curricula content and design
14. The small class sizes that allow for personalized learning experiences
15. The 1:1 technology that support the 21st century learning expectations in the classroom

Needs:

1. Develop elective courses to utilize the bridge simulator in partnership with an institution of higher education
2. Involve community stakeholders in the Senior Graduation Portfolio review process
3. Investigate the potential for AP courses for sophomore students

MARINE SCIENCE MAGNET HIGH SCHOOL 2016 SELF-STUDY REPORT



STANDARD 3: *INSTRUCTION*

RATING: EXEMPLARY

Standard 3: Instruction

NARRATIVE

Marine Science Magnet High School's teachers' instructional practices are continuously and rigorously examined to ensure consistency with the school's core values, beliefs, and 21st century learning expectations. The founding committee of Marine Science Magnet High School (MSMHS) defined the ten 21st century learning expectations for student development of academic competencies and civic and social competencies. The original cohort of teachers and administrators used these established expectations to develop the MSMHS core values and belief statement as a guiding principle for student learning. These are prominently displayed in every classroom and referenced regularly during instruction and non-instructional periods. The 21st century learning expectations are also embedded in all curricula, and students self-reflect on their growth in these competencies, using assignments as evidence of proficiency in the required graduation portfolios.

The staff and students of MSMHS also embody the school's motto, "Effort Creates Ability." This maxim promotes hard work over inherited talent and encourages students to reach for previously unseen successes. Instructional practices which support this principle include re-teaching of content to students, allowing retakes and corrections on tests and quizzes, and accepting the late work from students. One hundred percent of students in the class of 2015 successfully completed and orally presented a capstone portfolio requiring their reflection on and defense of their proficiency in each of the 21st century competencies. This statistic is further supported by the Endicott Survey results that indicate 100% of staff and 92.6% of parents agree instructional practices personalize instruction and support achievement of these values and expectations.

MSMHS ensures the specific language used in daily operations and lesson objectives is consistent with the school's core values, beliefs, and 21st century learning expectations. Lessons focus on explicit competencies and teachers post these competencies, along with the daily objective, in all classes. Detailed evidence demonstrating continuous examination of instructional practices includes informal and formal administrative observations of practice, with scheduled post-observation conferences and mid-year and end-of-year goal review and reflection. In these meetings with administrators, teachers examine their personal Student Learning Objectives (SLOs) where they have set goals for student performance, very often students' proficiency in the 21st century learning expectations.

Each MSMHS teacher participates in a weekly content-specific Professional Learning Community (PLC) and an Interdisciplinary PLC (IPLC) where collaboration around scheduled topics covers curriculum revision, as well as peer review of instructional practices. Once a month, teachers participate in Learning Walks to observe and reflect on implementation of core values and instructional support of the 21st century learning expectations across the content areas. Furthermore, professional development incorporates Anti-Defamation League training in classroom practice and diversity, Accountable Talk moves and functions, and current research on literacy instruction to support the student achievement of the MSMHS 21st century learning expectations. Teachers rely on student feedback to improve differentiation, lesson design, and student learning. Teachers frequently review student achievement data, available in the school-wide rubric database, to determine how instruction can be adjusted in order to further support achievement of the 21st century learning expectations.

The MSMHS instructional practices support the school's 21st century learning expectations by personalizing instruction, engaging students in cross-disciplinary learning and as

active and self-directed learners, applying knowledge and skills to authentic tasks, and encouraging self-assessment and reflection, and use technology in instruction. Based on data from the Endicott Survey, 93.3% of students and 100% of staff agree that teachers at MSMHS regularly personalize their instruction by offering choices in the books they read, the laboratory activities they pursue, and the technology they utilize to research and present information. Teachers use surveys and student feedback to select instructional methods, projects, and student tasks. Furthermore, 92.4% of students agree that teachers give them opportunities to choose topics in assignments that demonstrate their understanding of a unit.

The MSMHS Advisory Program personalizes lessons based on student interest surveys and conversations. The curriculum for advisory also considers the diverse needs of our students regarding college or career preparation and social issues. At times, students act as self-directed learners, creating and implementing lesson plans for entire grades in the advisory program. Moreover, the special education department personalizes the lessons and curriculum to meet the needs of the special education population in seminar courses. Depending on where students are in their educational career, lessons vary from becoming more acquainted with the high school community to developing vocational and post-secondary skills.

According to the Endicott Survey, 100% of staff and 95.1% of parents agree that teachers emphasize inquiry, problem-solving, and higher-order thinking in their instructional practices. All teachers have received training in the implementation of Bloom's Taxonomy and objective writing from the LEARN Professional Development Director and MSMHS administration. The theme of marine science is utilized in every classroom, creating many opportunities for cross-disciplinary lessons and connections. At MSMHS, social studies, mathematics, world language, science, and English departments incorporate the maritime theme through the study of literature,

history, and marine-science related performance tasks. Teachers use instructional practices that engage students as active participants in the lesson and as self-directed learners. During their coursework, students design and conduct independent research projects, propose ideas, solve problems, and engineer solutions to real-world issues. MSMHS courses offer an inquiry-based curriculum with many activities and authentic assessments that measure students' inquiry skills. The Connecticut Academic Performance Test (CAPT) for science focuses on assessing students' abilities to design and conduct experiments, evaluate experimental design, and examine the validity of experimental data. MSMHS students have consistently scored in the top ten high schools in the state of Connecticut on this test. Their success is the result of the focus on inquiry skills in each classroom at MSMHS.

The unique aquaculture lab facility offers students many opportunities to apply their learning to authentic tasks. Students maintain the facility, grow fish from the juvenile stage through maturation, and prepare fish to go to market. Students also research and propose new fish or aquatic species to be cultivated, evaluating the species' viability and potential for financial gain. The application of learning to real-world situations prepares students to work in science labs in college or as a marine-related career. Through community partnerships, students are guaranteed more authentic experiences. One of these experiences is working aboard the Enviro-Lab vessel with Project Oceanology. Students apply academic concepts through field research in water quality assessment, biodiversity sampling, and algae collection and analysis. Also, MSMHS recently partnered with the research facility at the Mystic Aquarium. As a result, Mystic Aquarium sends interns to work in the MSMHS facility alongside students and faculty to grow ornamental fish in captivity. In an elective Marine Technology course, students design and build a cardboard boat that will keep their body weight afloat, a project which requires both

engineering and construction skills. In seminar and English classes, students practice functional writing skills in the form of resumes, cover letters, and college application essays. Moreover, MSMHS provides in-school internship opportunities with a mentor teacher or staff member so students can pursue teaching, aquaculture, or psychology in greater depth, which also support post-secondary plans. For example, one student wanted to pursue a career as a history teacher, so she served as a Teaching Assistant for an MSMHS history teacher. Because of the school's unique relationship with the University of Connecticut (UConn) and close proximity to its Avery Point campus, several partnerships aside from the Early College Experience (ECE) program have evolved. Students from MSMHS were selected to work alongside distinguished scientists in the UConn Marine Science Department to conduct research, further supporting the MSMHS focus on inquiry and authentic experiences at MSMHS.

In all courses at MSMHS, teachers require students to self-assess and reflect on their own learning. According to the Endicott Survey, 96.6% of students agreed that teachers provide them with opportunities to assess their own work. Furthermore, teachers at MSMHS build time into their classes to provide students opportunities to self-assess and grade their own pieces of work with a school-wide rubric before turning it in. Students reflect throughout the year in the advisory program when students create and/or review their quarterly Student Success Plans. In other courses, teachers ask students to reflect on what they have learned at certain points of the year and/or their work habits. Students submit a written reflection or have a one-on-one conference with their teacher. Furthermore, in order to complete all graduation requirements, students must complete a portfolio in which they provide two pieces of evidence demonstrating proficiency on each of the 21st century learning expectations, and for which they write a detailed reflection of their growth and practice.

According to survey data, 99.6% of students agree that teachers integrate technology into their lessons. All students at MSMHS are given a laptop for use in and out of school, supporting the integration of technology in lessons. For students who cannot afford at-home internet access, the Parent-Teacher Organization (PTO) funds the cost of installation and monthly fees. Other instructional technology includes: iPads with universal internet access that allow students to use technology during off site field work, and video microscopes and Vernier probes that connect with software on students' laptops. MSMHS is outfitted with Wi-Fi which provide students internet access anywhere in the school and all classrooms have Promethean Boards. The library media center features many computers, scanners, and online databases for student use. Also, the facility contains an Interactive Learning Center (ILC). The ILC allows students to display their laptop screens on a large monitor that facilitates working collaboratively or presenting to a large group.

Teachers use a variety of technology to formatively assess students' knowledge. Students may sometimes use their cell phones during some teachers' formative assessments. Also at MSMHS, some teachers communicate with students through an anonymous text-messaging program where teachers can update students on changes in lesson plans or even post upcoming assessments. Some teachers may also have students use their cell phones to listen to audio books, or research questions or definitions during class. Teachers also incorporate the use of social media within the class, as well. For example, one teacher had students create a "Facebook" page for historical figures or authors. Furthermore, MSMHS instructors utilize a variety of technological equipment and programs in the classroom, such as LoggerPro, Microsoft Office, Prezi, Edmodo, Google Drive, Google Earth, PowToons, Survey Monkey, and Windows Movie Maker. The math and science departments use graphing calculators to support inquiry-based

learning. While the school has sets of calculators for use in school, students are also required to purchase a personal graphing calculator for home use. The MSMHS PTO purchases calculators for students who cannot afford one. Teachers also recognize that technology has become an important part of standardized assessments and have incorporated the use of a template recreating the format of the former Smarter Balanced Assessment in many lessons. This allows students to become familiar with the format and craft their responses accordingly.

Across learning areas and grade levels, MSMHS teachers routinely adjust their instructional practices to meet the needs of each student by using formative assessments, differentiation, purposeful group learning and all teachers provide additional support and use alternative strategies. The evidence shows that all teachers across content areas use formative assessment during instructional time. One hundred percent of staff report improving their instructional practices by using student achievement data from a variety of formative and summative assessments. Moreover, one hundred percent of staff also agrees that teachers have formal opportunities to examine student work to improve their instructional practices. Examples of formative assessments utilized to assess student understanding and comprehension include: Warm-ups / Do Now activities, classwork (progress monitoring), individual and small group check-ins (ex. show 1-5 for understanding), students' restating information, homework, pop quizzes, projects, and exit slips. Often, teachers will conference with students individually to gauge their understanding of concepts and content material.

As evidenced on the Endicott Survey, 96.9% of students reported that teachers at MSMHS utilize a variety of teaching strategies within their courses. This sentiment was echoed by 94.3% of parents who similarly felt as if their child was engaged as an active learner at MSMHS. One hundred percent of teachers at MSMHS report implementing a multitude of

differentiated instructional practices within the classroom to meet the educational, social, and emotional learning needs for all students. Examples of how teachers at MSMHS differentiate instruction to meet the varied needs of learners include but are not limited to: utilizing multimodal teaching/learning strategies; planning instruction; pre-teaching and re-teaching content in both individual and small group settings; providing guided-note sheets; delivering multiple examples of problems with the use of visual aids; breaking tasks down into simplified steps; scaffolding assignments and tasks; creating opportunities for dialogue in partner/small-group work sessions; using Bloom's Taxonomy to formulate lesson plans and activities; designing assignments that provide students with personal choice and multiple options; modifying assignments; implementing wait time for student responses; and employing prompting strategies and guiding questions.

Once per month, teachers have the opportunity built into their schedules to observe other teachers during Learning Walks. These observations provide teachers with ideas and new strategies to utilize in certain subjects or with specific students. In the PLC, IPLC meetings, and staffings, teachers also discuss successful strategies and methods they have used with students in the PLC or IPLC meetings. Additionally, teachers may meet with special education teachers, the school psychologist, or administrative staff individually to discuss the needs of their learners and how instructional practices can be effectively modified. The use of the co-teaching model in many subjects allows for collaboration between the special education department and individual teachers.

Endicott survey data from both teachers and students strongly support that group learning is an essential component of instruction at MSMHS. According to the data, 99.6% of students agree that teachers use group instructional activities within their classes, and 94.3% of parents at

MSMHS agreed that their children were engaged as active learners by their teachers within the classroom. Examples of group instruction at MSMHS include group research projects/presentations, partnering in the completion of lab-based activities and reports, small-group field research activities and environmental data collection, collaborating electronically for the completion of assignments/projects, peer editing exercises, small and large group close reading activities, and group annotations of classroom text. Activities are organized so that students can work in small groups or partnerships applying problem-solving skills to real-world scenarios. Teachers at MSMHS indicated that 100% of instructors adjust their instructional practices to accommodate the needs of their students by organizing group learning activities within lessons and units of study. Such group instructional activities within the classroom include implementing heterogeneous groupings for lesson instruction and reinforcing activities that are comprised of students with varying levels of skill and ability to foster interaction and encourage peer instruction to enhance learning, comprehension, accountability, and student ownership. Some examples of this grouping in practice include strategically grouping for lab activities in science classes and grouping students of different ability levels. Differentiated group learning activities across subject areas take the form of large group, small group, and partnered learning activities to engage students as active learners. In other courses, students may be grouped for a project to teach the class a specific lesson or skill. In one example, the UConn Early College Experience (ECE) Maritime History class and the Honors English II class are organized as a cohort. Students must take both classes to enroll and often are grouped together for interdisciplinary activities and field trips.

All content areas show ample evidence that teachers provide additional support and that they use alternative strategies within the regular classroom. The Endicott Survey data showed

that 99.6% of students agreed that, “Teachers use group activities in my classes,” and 96.6% agreed that, “Teachers use a variety of teaching strategies in my courses.” One hundred percent of the teachers agreed that they adjust their instructional practices by organizing group learning activities. One hundred percent of teachers agreed that they use differentiated instructional practices to meet the learning needs of all students. According to the Endicott Survey, 94.3% of parents agree that teachers engage their son/daughter as an active learner and 95.9% of teachers provide additional support to their son/daughter when needed. Furthermore, 89% of the parents agreed that teachers modify/adjust their instructional practices based on students’ progress in achieving the MSMHS 21st Century Learning Expectations.

In addition to standard classroom instruction, some students may receive guided notes and visuals prior to lessons in order to support the class notes and lecture. Essay organizers are often provided to all students. Formulas necessary to complete various math problems may be distributed as well as an outline of the steps required to solve problems. Within all classes, students may be grouped according to their ability or progress towards proficiency on the 21st century learning expectations to provide extra support to those in need. Scoring guides and MSMHS rubrics are used to clarify expectations for tasks. PowerPoints, notes, worksheets, and study guides are posted to a networked drive, as well as Google Drive, so that students can access these at any time. Extra guidance and support is provided for organization, work completion, essay writing, and research projects. Many teachers also make themselves available before and after school, during study halls, seminar classes, and over email for extra help. Teachers meet with special education and administrative staff as needed throughout the school year to ensure that IEP and 504 accommodations and modifications are successfully

implemented in their classes. Group and individual learning experiences are provided for all learners.

Students are provided with work samples and exemplars as a guide for assignment expectations. Co-taught classes are offered in mathematics, language arts, social studies and science for students who need additional support. Math lab is available daily so that all students can receive extra help. National Honor Society students offer peer tutoring when students schedule it. Students who need extra support are assigned to seminar, which offers academic and organizational support on an individualized basis. The Scientific Research-Based Intervention (SRBI) Team (also known as Response to Intervention/RTI), monitors students and puts interventions into place as the team deems necessary. Teachers also engage students in small group instruction and activities. Re-teaching is provided when necessary, as well as hands-on learning opportunities to improve student comprehension and retention of material.

Teachers at MSMHS constantly improve their instructional practices, both individually and collaboratively, by using student achievement data from a variety of summative and formative assessments, examining student work, using current research and engaging in professional discourse; using feedback from a variety of sources including students, parents, other teachers, and supervisors. Faculty use student achievement data from a variety of summative and formative assessments when looking at how to better modify/personalize their instructional practices appropriately. All MSMHS teachers report using student achievement data to improve their instructional practices. During classes, teachers use data collected from both formative and summative assessments to determine if practices need to be changed. At MSMHS, teachers use a variety of formative assessment strategies and techniques to gauge student comprehension. The information gathered allows teachers to change plans as needed or

to revise the next day's lesson. Teachers utilize summative assessment scores on tests and quizzes to determine whether or not more time is needed for content mastery. Once a month in PLCs and IPLCs, teachers examine student achievement data and discuss practices observed during Learning Walks to identify skills and areas needing improvement for their students and modify the unit plans and instructional practices within their curricula as necessary. In SRBI meetings, MSMHS staff examine achievement data from the CMT, ReadStep, PSAT, CAPT and SAT tests to determine and address instructional needs not only across courses and curricula, but differences in skill development between different classes (i.e. incoming freshmen versus current freshmen). The SRBI Team also reviews data collected from Google forms completed by teachers. The forms are crafted for students on an individual basis so that the effectiveness of instructional practices can be measured and interventions put in place as needed.

MSMHS teachers consistently examine current research. Teachers also evaluate work using the Stanford Calibration Method to ensure consistent grading of assignments among teachers. Stanford Calibration Method is also helpful as teachers develop new ways of teaching content based on the achievement of students across classes within the same course or subject area. Every teacher at MSMHS is given the opportunity to improve his or her teaching by participating in workshops, conferences, graduate coursework, and professional development. All teachers were provided with instruction on Accountable Talk and other aspects of the University of Pittsburgh's Institute of Learning, Richard DuFour's work on Professional Learning Communities, and the Stanford University's Innovation Lab Network and SCALE (Stanford Center for Assessment and Learning Equity) program. Many teachers are members of professional organizations within their subject areas, receiving monthly newsletters and journals directly related to the instruction of content in their courses. In the summer of 2014, all teachers

read the book *Mindset* by Carol Dweck and participated in professional development on Angela Duckworth's concept of grit.

One hundred percent of teachers report they have formal opportunities to examine student work to improve instructional practices. Every month teachers dedicate at least one PLC meeting to the examination of student work. The purpose of this examination is not only to improve instruction but to monitor student progress towards proficiency on the school's 21st century learning expectations. At a minimum, MSMHS staff engages in professional discourse on a weekly basis. According to the Endicott Survey, 100% of teachers report improving their instructional practices by engaging in formal opportunities for professional discourse focused on instructional practices. Teachers at MSMHS participate in PLC meetings designed to improve instructional practices. One PLC meeting per month is dedicated to Learning Walks. During Learning Walks, PLC groups visit two classrooms and observe their peers. As they watch, teachers complete worksheets detailing specific instructional practices they share in common with the observed colleague, as well as instructional practices they would like to adopt for their own classroom. Furthermore, teachers note instructional strategies that specifically support the development of the school's 21st century learning expectations. Teachers then return to their PLC to discuss observed practices and how those practices might also be incorporated in their own classroom.

During regular IPLC meetings, teachers from multiple subject areas engage in professional discourse. The first meeting consists of unit and topic shares where teachers summarize upcoming topics in each of their courses. During this IPLC meeting teachers often discuss how lessons and instruction across classes can support one another. The second IPLC meeting is used to discuss the aforementioned Learning Walks. At this time, teachers can further

question and discuss different instructional practices they observed in classes and received feedback from other teachers. During the final IPLC meetings of the month, freshman teachers meet to discuss freshman students who are struggling academically, behaviorally, or emotionally to brainstorm instructional practices which have proven successful with those students. In addition, a non-freshman teacher presents an instructional practice to the group with the goal of providing teachers with new and innovative practices they can adopt for their classrooms. For example, one teacher presented a discussion model in preparation for the delivery of the Harkness table in the library media center. The Harkness discussion model encourages the use of Accountable Talk in a Socratic Seminar setting.

In addition, to improve their instruction, MSMHS teachers consistently use feedback from a variety of sources including students, other teachers, and supervisors. Teachers at MSMHS receive feedback from administrators who observe every teacher at least three times every year. After observations, administrators meet with the teacher to offer feedback. Teachers at MSMHS also have meetings with administration to discuss their SLOs. During these meetings, administrators can provide feedback to teachers on how to improve their instructional practices to better achieve their goals. In addition, there are many avenues for teachers to meet one-on-one or as a group to discuss and share instructional practices. At MSMHS, there are student-centered meetings called staffings where teachers meet to discuss strategies that are effective with individual students. Best instructional practices for individual students are also communicated through PPT, SRBI, 504 planning meetings, and IPLC meetings. Teachers at MSMHS also have common planning periods within each department which allows them to discuss instructional practices that have been particularly effective for individual students or certain units of study.

Teachers at MSMHS utilize formative assessments to gauge the effectiveness of their instructional practices and solicit feedback from students to inform their lesson design. Thus, lessons can be adjusted that day in class, or the next class, to improve student comprehension. Many teachers also utilize course surveys where students can advise teachers what activities or practices proved effective and which practices did not. Teachers at MSMHS also use performance on standardized tests such as the CAPT test to adjust instructional practices from year to year.

Teachers at MSMHS are continuously looking for new ways to gather parent feedback. The latest survey showed 55.5% percent of parent respondents reported teachers have asked for feedback about teachers' instructional practices. A majority of parental feedback requests occur during advisor phone calls, teacher phone calls, or parent-teacher conferences. Many teachers also remain in contact with parents via email throughout the year to discuss student performance and instructional practice in class. MSMHS teachers are presently brainstorming new ways of requesting feedback from parents using online surveys.

Teachers, as adult learners and reflective practitioners, maintain expertise in their content area and in content-specific instructional practices. According to the Endicott Survey, 100% of teachers at MSMHS agree that they are committed to maintaining and developing their expertise within their content areas, as well as keeping current with data-based instructional strategies. That same survey indicated that 99.2% of students believe that the teachers are knowledgeable about their content area; 95.6% of parents agree that their child's teachers maintain expertise in their subject areas. An in-house survey revealed that most faculty are members of professional organizations, while 100% of faculty participate in content-specific workshops, graduate coursework, and/or annual conferences to keep abreast of the most recent

instructional strategies. Two MSMHS teachers were selected to be part of the SCALE Innovative Lab Network at Stanford University, focusing on calibration and scoring of qualitative rubrics. Special education staff receive regular professional development in best practices within their field. Every AP course teacher is provided week-long or two-week-long training at the Taft School and all UConn ECE teachers attend a biannual content-specific workshop led by university professors. Also, the MSMHS Teacher of the Year is granted an all-expenses paid trip to a recognized national conference in his or her subject area.

Formal PLC and IPLC meetings are scheduled weekly for teachers to share insight into current research and best practices. Furthermore, within the school day, there are frequent opportunities for PLC and IPLCs to meet informally to discuss cross-curricular planning. Monthly Learning Walks provide further opportunity for professionals to observe other instructional practices outside of their content area, in classes with students they might also teach. Once a month, each PLC uses the Stanford Calibration Method to assess student work, and teachers discuss their individual rating in an effort to ensure students are evaluated on a consistent basis within the department. Faculty members read and share research articles with one another that are both content specific and literacy focused.

Once a month, throughout the 2014-2015 school-year, teachers were provided professional development with Common Core coaches about incorporating literacy in curriculum and instruction to promote the Common Core State Standards (CCSS). This professional development ensures that the faculty maintains expertise on upcoming initiatives and standardized testing. For example, in preparation for the CAPT and SBAC testing, instructional strategies and lessons were modified in order to promote not only familiarity with the content but also with the assessment format. The Aquaculture Director is Hazard Analysis and Critical

Control Points (HACCP) trained and certified through the FDA. Staff within the Science Department or who teach in science classrooms are trained yearly by the MSMHS Chemical Hygiene Officer on lab safety and best practices.

Teachers are also offered multiple opportunities to reflect on their own practice. Teachers have three formal meetings throughout the school-year with administration to design and reflect on SLOs and personal goals. Teachers are also given the opportunity to discuss their strengths and weaknesses within their PLCs and IPLCs. Teachers model the school mindset of “Effort Creates Ability” and model this mindset for their students. Many teachers also share stories of their own mistakes or failures and the lessons they learned as a result. Teachers and administration identify themselves as “Team MSMHS” and maintain an open-door policy for coworkers to provide and receive feedback and advice. All beginning teachers are paired with a mentor teacher through the Connecticut Teacher Education and Mentoring (CT TEAM) program. Beginning teachers, in collaboration with their mentor, reflect on their practices as an educator and discuss ways in which they have grown or can improve. Overall, teachers at MSMHS use reflective practices to improve their instruction.

EXECUTIVE SUMMARY

The Marine Science Magnet High School (MSMHS) has adopted a successful set of core values, beliefs, and 21st century learning expectations. All teachers' instructional practices are continuously and rigorously examined to ensure consistency with the promotion and the integration of these core values, beliefs, and 21st century learning expectations. The school as a whole works to embody its motto, "Effort Creates Ability." All departments and teachers are responsible for assessing these 21st century learning expectations using a set of school-wide rubrics and document progress through the school's rubric database.

MSMHS instructional practices support the school's 21st Century Learning Expectations by personalizing instruction, engaging students in cross-disciplinary learning and as active and self-directed learners, applying knowledge and skills to authentic tasks, encouraging self-assessment and reflection, and using technology in instruction. Many cross-disciplinary experiences occur regularly in classrooms and in fieldwork at MSMHS. Authentic experiences and the personalization of learning are strengths at MSMHS, with teachers integrating both into lessons which incorporate the school's marine-science theme. Community partnerships and the state-of-the-art aquaculture facility offer students unique and meaningful opportunities. Students are also provided with many opportunities to self-assess, with the culminating experience the presentation of their senior capstone portfolio. The integration of technology into lessons at MSMHS is seamless with our 1:1 technology ratio.

Across learning areas and grade levels, MSMHS teachers routinely adjust their instructional practices to meet the needs of each student using formative assessments, differentiation, and purposeful group learning. Teachers provide additional support and use alternative strategies as required to ensure student's mastery of the unit content. All teachers

report that they use formative assessment techniques consistently to inform their instruction. Differentiated instruction in all disciplines, along with a strong co-teaching model, allows all students equal access to the information based on individual skill level. When appropriate, students are given opportunities to design and lead lessons for their peers. Student-led lessons occur frequently within the advisory program, but are also evident in other subject areas and courses at MSMHS. Purposeful group learning activities and summative projects are apparent in all subject areas at MSMHS. Teachers are readily available before and after school for extra help, and all teachers offer modified or alternative assignments as needed to support all learners.

Teachers at MSMHS consistently improve their instructional practices, both individually and collaboratively, using student achievement data from a variety of summative and formative assessments, such as examining student work, reviewing current research, and engaging in professional discourse. MSMHS teachers also utilize feedback from a variety of sources including students, parents, other teachers, and supervisors. There are scheduled times within the school day for teachers to work collaboratively, discuss achievement data and instruction, examine current educational research, and observe other teachers. The unique culture at MSMHS encourages collaboration. Teachers often solicit feedback from one another, showing their commitment to improving their own instruction and enhancing student learning. Once per month, teacher teams participate in structured Learning Walks where they observe other teachers and then discuss their observations. There is currently a form which guides the discussion. Feedback from students and parents is also welcomed by all teachers. Students are provided with specific feedback forms or participate in feedback discussions. Parents are given many opportunities to meet with teachers, speak with them on the phone, or communicate via email, however, a

streamlined process of parent feedback on instruction would greatly help teachers to receive valuable information.

Furthermore, teachers, as adult learners and reflective practitioners, maintain expertise in their content area and in content-specific instructional practices. Many resources are provided to teachers by LEARN and by MSMHS administration for professional development or opportunities to attend content-specific professional conferences. Many teachers at MSMHS are also members of content-specific professional organizations or community groups. MSMHS administration provides relevant and research-based professional development for all faculty members many times throughout the school year. Teachers are encouraged to reflect often throughout the year as part of the evaluation process and within their PLCs.

Based on the NEASC Committee on Public Secondary Schools (CPSS) Rating Guide for the Standard on Instruction, MSMHS judges its adherence to the Standard as **EXEMPLARY**.

Strengths:

1. The instructional practices consistently and closely aligned to the 21st century learning expectations
2. The universal adoption of the motto, “Effort Creates Ability”
3. The continuous examination of instructional practices
4. The personalization of instruction seen in every classroom
5. The integration of the marine science theme into all classrooms
6. The state-of-the-art aquaculture facility in the MSMHS building
7. The allowance of authentic experience through community partnerships
8. The seamless integration of technology in lessons
9. The use of summative and formative assessment data to plan lessons and activities

10. The successful use of differentiated instruction
11. The allocation of time for teachers to meet with and observe other teachers
12. The acceptance and integration of student feedback
13. The resources provided by the district and administration to teachers for the improvement of instructional practices
14. The expertise maintained by staff within their respective subject areas
15. The encouragement of teacher reflection by administration and peers

Needs:

1. Create a user-friendly format for feedback on instruction from parents
2. Incorporate student design and implementation of lessons outside of the advisory setting

MARINE SCIENCE MAGNET HIGH SCHOOL 2016 SELF-STUDY REPORT



STANDARD 4: *ASSESSMENT OF AND FOR STUDENT LEADERSHIP*

RATING: EXEMPLARY

Standard 4: Assessment

NARRATIVE

The Marine Science Magnet High School staff continuously employs a formal process, based on school-wide rubrics, to assess whole-school and individual student progress in achieving the school's 21st century learning expectations. According to the Endicott Survey, 100% of staff understands the formal process, based on the use of the school-wide analytic rubrics, to assess school and individual student progress in achieving learning expectations. In addition, 100% of teachers reported that they use the school-wide analytic rubrics when assessing student work. Faculty continuously input student progress towards each 21st century learning expectation into a student rubric database. Every semester, student competency reports indicating individual progress towards achieving the school's 21st century learning expectations are mailed home. An overall summation of the school's progress towards the 21st century learning expectations is published on the school website annually. Furthermore, advisors review individual student progress every quarter. The culminating assessment is a graduation portfolio demonstrating proficiency or above across each 21st century learning expectation as evidenced by the student's rubric rating. Teachers set Student Learning Objectives (SLOs) in the beginning of the year for student proficiency, analyze student progress at midyear to adjust goals appropriately, and conduct a final evaluation of student progress at the end of the year.

Marine Science Magnet High School staff frequently communicates individual student progress in achieving the school's 21st century learning expectations to students and their families. The school also communicates school-wide progress towards achieving the 21st century learning expectations to the community stakeholders. According to the Endicott Survey, 85% of parents report that the Marine Science Magnet High School (MSMHS) provides them with a

formal report, in addition to course grades, which explains their son's/daughter's progress in achieving school-wide 21st century learning expectations. For rubric-based assignments, students receive a copy of their rubric attached to the assessment and teachers conference individually with students to review their performance. Each semester, competency reports are sent home to students and their parents. Professional staff members contact parents once a quarter to discuss individual student progress towards achievement of 21st century learning expectations through the advisory program. In September, the Principal presents a report, "MSMHS by the Numbers," to all stakeholders. This report outlines student progress towards 21st century learning expectations. Data on the school's overall progress towards achievement of the 21st century learning expectations is on the school website. The first report was mailed home in June 2014; subsequent reports are mailed on a semiannual basis.

Professional staff consistently collects, disaggregates, and analyzes data to identify and respond to inequities in student achievement. According to the Endicott Survey, 100% of staff agrees that teachers collect, disaggregate, and analyze data to identify and respond to inequities in student achievement. The school's Scientific Research-Based Intervention (SRBI) Team, consisting of teachers, administrators, school counselors, and a school psychologist, continually gathers and analyzes student data in order to address inequities in student achievement. Teachers may also refer individual students to the MSMHS SRBI Team for review of student achievement across content areas. This team adheres to a specific roadmap to guide the intervention process. In addition, parents may make a referral to the SRBI Team if they have concerns regarding their child's achievement. Inequities in school-wide student proficiency are analyzed every semester. Data analyzed includes attendance records, PowerSchool grades, teacher

observations, student demographic data, CMTs, MAP, Readiness, Pre-CAPT, CAPT, PSAT 8/9, PSAT, Smarter Balanced, AP, and SAT.

According to the SRBI Team Roadmap, the MSMHS SRBI Team first holds a staffing where all the student's teachers meet to discuss concerns, observations, performance, and current Tier I interventions. The MSMHS SRBI Team then examines student performance in specific content areas to identify skill deficiencies. Finally, using input from students, teachers, and parents, individual interventions are designed and alternative strategies implemented. These individual interventions and alternative strategies are then written into a Student Intervention Plan (SIP), issued to all of the student's teachers. The SRBI Team reviews the student's plan at a minimum of every four to six weeks. An additional data source was added in early 2014, the MSMHS Freshman Interest Survey. This instrument provides valuable student feedback because it allows students to identify their strongest and weakest subject areas; their strongest and weakest skills; the availability of internet at home; and the average amount of time they spend on homework. Results were shared with staff members to help guide instruction and formulate Tier I, II, and III interventions.

Interventions to support student achievement have included technology training for students; referral to a member of the MSMHS National Honor Society for tutoring and/or Math Lab; supervised study halls; one-on-one tutoring in specific content areas to address skill deficiencies; schedule changes; and increased parent communication. The MSMHS SRBI Team also examines behavioral data collected through Google Drive. Teachers routinely submit their observations and concerns regarding student behavior in class. This information may result in the development of a Student Intervention Plan (SIP), which may include a referral to counseling

services, the issuance of a “hot pass” to provide an intervention for anxiety or disruptive behavior, schedule changes, supervised study halls, or other appropriate supports.

It is a school-wide expectation for all MSMHS faculty to communicate to students the applicable unit specific learning goals, as well as the 21st century learning expectations, to be assessed prior to the beginning and during the instruction of all units. Unit specific goals, standards, and 21st century learning expectations are conveyed to students at the beginning of each unit. All teachers provide students with unit overviews both on paper and digitally on syllabi. Learning objectives relating to the unit goals are posted daily for each lesson so that students are able to assess their position within the unit. These objectives, along with unit goals, are found in the curriculum for the unit of study. Each course has articulated the progression of unit-specific goals in the curriculum. According to the Endicott Survey, 95% of students and 87.7% of parents believe that teachers explain and/or communicate the learning expectations prior to each unit of study. The 21st century learning expectations are posted on the school website, in the student handbook, throughout the school, in every classroom, and in the Program of Studies. Course syllabi, curricula, and monthly lesson plans allow teachers to monitor and inform students of upcoming assessments utilizing specific school-wide rubrics. All students’ scores relating to the usage and performance for each rubric are stored in the Rubric Database on Google Drive, to monitor student growth. Students can view their individual rubric database at any time through their school-assigned Google account.

It is the norm for all MSMHS faculty to provide and review rubrics for assessments prior to the beginning of student work on assignments. Rubrics are provided with assessments to inform students of performance expectations, which allow students to measure their progress and performance in relation to the standards. According to the Endicott Survey, 95% of students

state that they understand in advance what work they have to accomplish to meet their teacher's expectations. Teachers review rubrics with students before beginning work in order to help students understand expectations. A significant majority of students, 94.5%, agree that they understand the rubrics their teachers use. The school-wide rubrics are also posted online so that students and parents have access to them at all times. According to the Endicott Survey, 97.9% of students believe that teachers use rubrics to assess student work. Many teachers have students self-assess and reflect on their work with the given rubric before the assignment is submitted. Available online is a detailed curriculum for each content area that includes a progression of assessments for which rubrics are provided. The written curriculum, as well as the rubric database, demonstrates the use of rubrics along with summative assessments as a school-wide practice. Parents are sent competency reports semiannually that communicate their child's current performance with relation to the MSMHS school-wide rubrics and learning expectations; 82.6% of parents feel they are familiar with and understand the school-wide analytic rubrics.

At MSMHS, teachers consistently employ a range of assessment strategies, including formative and summative assessments, in each unit of study. All teachers at MSMHS use a variety of strategies to formatively and summatively assess students. According to the results of the Endicott Survey, 100% of teachers reported utilizing a variety and range of assessment strategies both formative and summative within their classes. On any given day, one might see students conducting an experiment, responding to a warm-up question, using online activities and resources, taking a quiz or test, collaborating on a task, completing hands-on performance tasks, or working towards achieving exemplary on a school-wide rubric. A universal grading system is outlined in the MSMHS Parent-Student Handbook that explains specific point values for various types of assessments. At MSMHS, midterms and finals are valued at 400 points; all

tests constitute 200 points; quizzes 100 points, performance tasks/projects, and labs are 100-200 points respectively; and homework/classwork assignments are valued in 10 point increments.

While traditional pencil-and-paper tests are common, more innovative modes of assessment are apparent across all disciplines, made possible by the 1:1 environment of the school. In this 1:1 environment, all students receive a laptop upon entering the school as a freshman. Some examples include math students who use Khan Academy to assess mastered skills; science students who utilize Excel and similar programs to generate graphs to present data; chemistry students who complete labs that demonstrate their knowledge; and world language students who rely on Quizlet, Quia, StudySpanish.com, and Pearson to prepare and demonstrate knowledge. The MSMHS Marine Studies program is unique as well. Students have the opportunity to take Marine Studies classes in the school's aquaculture lab where they apply hands-on learning to raise and harvest fish, which have been sold to a local market. Within this and other science classes, students use the MSMHS bridge simulators to practice operating and navigating a vessel in various conditions and bodies of water. In addition, students apply their knowledge and operate small vessels in Stonington Harbor with the New England Science and Sailing (NESS) organization. Successful completion of the Marine Studies course results in a summative assessment of students' boating knowledge during which students take the official state of Connecticut boater's test and obtain their Connecticut boating license upon earning a score of 80% or higher.

MSMHS also offers a field research class where students go out to the local state park to collect data to support research of their choosing. Partnerships with UConn Avery Point and Project Oceanology (Project O) allow students to go out on the Project O vessel where they apply basic concepts, principles and theories of biology, chemistry, physics and earth and marine

sciences. Students also identify and solve problems through scientific exploration on the vessel. Students can create lab reports or perform operations with the data collected on the vessel. Within science classrooms, students collaboratively conduct labs and write lab reports to convey understanding to all parties.

All MSMHS faculty collaborate regularly in formal ways on the creation, analysis, and revision of formative and summative assessments, including common assessments. Regularly scheduled meetings of Professional Learning Communities (PLCs) and Interdisciplinary Professional Learning Communities (IPLCs) provide faculty with numerous opportunities to discuss assessments, including formative and summative. PLCs meet formally at least once a week for 84 minutes during school. These meetings are scheduled to address specific topics. Within these meetings, cohorts regularly work on assessment, Stanford Calibration, curriculum revision, and engage in Learning Walks to observe the best practices of other disciplines and educators. During the summer of 2014, for one week, two faculty members travelled to Stanford University to receive training on the University's calibration model. The team of teachers delivered professional development in the teacher workdays days prior to the start of school. In this professional development, the faculty members presented the model and then guided the entire faculty in using the school-wide Communication Rubric, Rubric 1, for calibration. All faculty read two pieces of student work, assessed the work using the school-wide rubric, and then discussed their assessment results. This model was then utilized throughout the year in departmental PLC meetings. This is evident by the PLC feedback forms that are filed after every meeting through Google Drive. Two IPLCs meet once a week before school for 30 minutes. During these meetings, faculty members discuss and plan future assessments, common

assessments currently in use, as well as discuss and revise assessments based upon individualized learning.

Assessment is a major piece of the PLC meeting built into the academic schedule at MSMHS. In these meetings, PLCs collaborate in the creation and revision of common assessments. PLCs also commonly calibrate assessments through the use of school-wide rubrics. This ensures common understanding of the assessment criteria for all grades and competencies. PLCs utilize the Stanford Calibration method to specifically ensure common writing and literacy assessment across the curriculum. Within this calibration, teachers blind score according to the communication rubric standards to analyze data or collect overall student achievement and consider adjustments to the assessment. The entire faculty has practiced this method in professional development meetings during the school year using the school-wide Communication Rubric, Rubric 1. Individual PLCs have also applied the same calibration method to align assessment of the other school-wide rubrics. For example, the math department has calibrated student work using Mathematical Problem Solving Rubric, Rubric 3, and Problem Solving Rubric, Rubric 7. The Social Studies department has calibrated student work using Technology Rubric, Rubric 6 and Problem Solving Rubric, Rubric 7.

Teachers adhere strictly to meeting and PLC times. In addition to these weekly meetings throughout the school year, it is common for departments to meet during the summer to plan for the following year. For example, in June of 2014, representatives from each department attended a Curriculum Academy hosted by LEARN, where they revised the template for the school-wide curriculum. The focus was to list specific formative and summative assessments in each unit of study along with the specific rubrics used. As evidenced by the Endicott Survey, 100% of staff

report that teachers collaborate regularly in formal ways on the creation, analysis, and revision of formative and summative assessments, including common assessments.

As for cross-curricular development, the IPLC plan together and synthesize common thematic concepts and subject matter. For example, both the Social Studies and Language Arts Departments collaborated in the development and creation of student research papers in the spring of 2015. Within these conjunctive research efforts, the Social Studies Department provided research topics for students based upon World Maritime History. Students researched evidence for their chosen topics, fabricated outlines and created a rough draft that they would revise and finalize within their English classes. Both Social Studies and Language Arts teachers annually review these papers in their respective processes, research and rough draft for social studies, revision and final drafts for language arts. In addition, chosen literature in the Department of Language Arts reflects and ties in with the chosen curricula within the departments of Science, Social Studies, and Math. With the reading and analysis of the novel *Life of Pi* by Yann Martell, students incorporate and synthesize information discussed in their other classes, including navigation and survival at sea; imperialism in Rudyard Kipling's *White Man's Burden* and *American Notes*; and finally the concept of cod fishing and industry within Kipling's *Captains Courageous*. These selections connect student learning between departments and exemplify the focus of the Maritime theme of MSMHS. Furthermore, the Special Education Department collaborates with regular education teachers to provide modifications or adaptations to assignments for students receiving special education services.

Teachers at the Marine Science Magnet High School provide specific, timely, and corrective feedback to ensure students revise and improve their work. The Endicott Survey result shows that 89.5% of students feel that their teachers assess/correct their school work in a

reasonable amount of time. Consistent with a school-wide policy implemented in 2013, teachers enter grades into PowerSchool on a weekly basis. Teachers also provide ongoing specific individual feedback through informal formative assessments using both written and verbal communication. Teachers write directly on assignments and/or provide comments on digital files. Furthermore, the Endicott survey also found that 85.2% of parents feel that their student's teachers provide timely and corrective feedback to assist them in revising and improving assignments. This is evidenced by the fact that most writing assignments assigned within the building require a rough draft phase before completion. Rough drafts are reviewed by the teacher and student revisions are made based upon the teacher's recommendations. All disciplines within the building also offer opportunities for students to meet with their instructors one-on-one before and/or after classes. In 2013, the school began a morning Math Lab, where students can receive extra help in the half hour before school with a math instructor. Teachers also apply the school-wide rubrics to many assessments, allowing the student to recognize their specific performance on the task, thereby providing students with the ability to track their own progress within the academic competency.

MSMHS teachers regularly use formative assessment to inform and adapt their instruction for the purpose of improving student learning. On a daily basis, teachers employ various methods to check for student understanding, including but not limited to: Bell Ringers/Do Nows, Accountable Talk discussions, mini whiteboards to review presented material in a timely and efficient manner, exit slips, thumb-voting processes, Socratic seminars, Harkness Table discussions, fishbowl discussions, self-rating on school-wide competencies, reading annotations and classroom discussions. On a weekly basis, teachers administer quizzes, MLA-formatted paragraph responses, laboratory reports, lab-technique exercises, online assessment

activities (e.g. Quizlet, Khan Academy, Pearson Success, Google Drive, Study Spanish) reading guides, reading checks and binder checks. The results of these assessments inform teachers of their students' progress toward building skills and comprehension. The results also provide teachers with opportunities to review and modify lesson plans to include re-teaching, revisiting skills and information, and providing unique, individualized learning experiences to address each of their students' needs. To improve common instructional practices, PLCs meet two to three times per week to analyze student achievement data from a variety of common formative and summative assessments, including the use of the Stanford Calibration method to ensure consistency across the disciplines. Furthermore, one of the IPLC meetings each month is dedicated to a faculty member presenting a successful assessment strategy and is referred to as "Best Practice" on the IPLC calendar. In addition, monthly Learning Walks focus on assessment practices. In these Learning Walks, small cohorts of professionals, made up of teachers in content specific PLCs, visit classrooms during instructional time for approximately 15 minutes. In these 15 minutes, the cohort observes the assessment strategies utilized by the teacher and then discusses these practices directly after the informal visit.

Teachers and administrators of MSMHS, individually and collaboratively, examine a range of evidence of student learning for the purpose of revising curriculum and improving instructional practice including student work, common assessments, individual and school-wide progress in achieving the school's 21st century learning expectations, standardized assessments, survey data from current students and data from sending schools. All subject areas are required to create and administer common summative assessment for each unit of study per course. Student work from the common assessments is gathered and examined by teachers according to a standardized protocol. School-wide rubrics are used to assess individual student work. Teachers

meet in PLCs to discuss and analyze potential changes to the assessment or instruction of the content leading up to it based on the analysis.

The examination of student work is pervasive across the school. In the academic schedule, one PLC meeting per month is dedicated to a review of student assessment results. The purpose of these assessment-specific meetings is to improve student outcomes and to discuss effective classroom practices between department teachers. According to the Endicott Survey, 100% of teachers agree that teachers and administrators examine a variety and range of student work and assessments to revise and improve curriculum and instructional practices. 98.7% of students agree teachers use a variety of methods to assess their learning according to the Endicott Survey. Teachers use formative assessments, such as exit tickets for content acquisition or periodic check-ins, where students self-rate their mastery of material. Assessment data is used to target specific students for intervention. Teachers may also use the information to redesign and re-deliver the lesson.

Common course and common grade-level assessments are used extensively by faculty. Teachers utilize data from assessments to make adjustments to the curriculum and instructional practices in response to student needs. In 2013, specific changes were made to the Civics curriculum based on the teacher-identified need to incorporate digital citizenship and MLA formatting to improve student writing and communication skills. In all courses, faculty employ a variety of assessments such as tests, oral presentations, research papers and model-building to assess student learning. The myriad of assessments reflect the diversity of ways students will need to demonstrate competency in college and in the workforce. Moreover, these assessments allow all students to have the opportunity to demonstrate success that reflects their learning. According to the Endicott Survey, 89% of parents agree that teachers use a variety of

methods to assess their son or daughter's learning. These results are further strengthened with 98.7% of students agreeing that “My teachers use a variety of methods to assess my learning.”

Examination of individual and school-wide progress in achieving the school’s 21st century learning expectations is pervasive across the school. From the opening of MSMHS, the 21st century learning expectations were adopted school wide. The nine rubrics are utilized to assess students’ progression in the competencies. It is common practice for teachers to refer to 21st century learning expectations that their lessons will target and to post them in each classroom. During one PLC meeting per month, teachers discuss the results of rubric data on common assessments. Furthermore, many teachers have selected specific rubrics for their SLO goals as part of their formal teacher evaluation. Therefore, on an individual basis and as a PLC, teachers use the data from the students’ level of rubric competency to develop instructional strategies to increase student skills.

Upon acceptance to MSMHS, sending districts provide the school with pertinent documents from the student’s home district cumulative file. Documentation includes Connecticut Mastery Test (CMT) scores, report cards, disciplinary files, IEP/504 paperwork, diagnostic evaluations, immunization records, and physician/specialist health reports. The special education and administrative team remains in continuous contact with these districts to obtain any additional documentation needed to properly support students. District representatives from sending schools attend PPT/504 meetings a minimum of one time per school year to ensure students’ academic, social/emotional, and physical servicing needs are being adequately met. At MSMHS, all students take college preparatory standardized assessments beginning freshman year (ReadiStep, PSAT 8/9, PSAT, and SAT). Universal screenings are given to all incoming students at the start of their first year at MSMHS to help

with course placement and scheduling. All freshmen are placed into heterogeneous language arts, social studies, and science classes where teachers formatively assess and evaluate the skills of each student to ensure proper placement. Qualitative feedback from United States Coast Guard Academy (USCGA) and University of Connecticut professors is also used to revise the assessment practices included in the MSMHS curriculum, such as the MSMHS lab report guidelines used by MSMHS students. Teachers have met with USCGA professors, and regularly work with University of Connecticut professors in Early College Experience (ECE) programs to vertically align the skills of MSMHS students to match the requirements placed upon incoming college freshmen.

In the fall of 2014, the MSMHS Freshman Interest Survey was administered to students. This instrument provided valuable student feedback because it allowed students to indicate their strongest and weakest subject areas; their strongest and weakest skills; the availability of internet at home; and the average amount of time they spent on homework. Student responses were analyzed by the SRBI Team and disseminated to staff members to assist with assessment design and implementation. In the fall of 2015, the school counseling department surveyed alumni from the Class of 2014 and 2015. Alumni qualitatively indicated their level of preparedness for collegiate study based on the MSMHS curricular offerings and rigor. Survey recipients were also asked to identify potential areas of improvement regarding assessment practices.

Grading and reporting practices at MSMHS are regularly reviewed and periodically revised to meet the needs of faculty, students, and community. The MSMHS universal grading system is used by all teachers and can be found in the MSMHS Parent-Student Handbook. All teachers follow this system by assigning point values to specific types of assessments to ensure consistency across departments. This system was developed after the first year the school was

open in response to student and parent feedback. According to the MSMHS Parent-Student Handbook, assessments are worth the following point values: midterms and finals 400 points; tests 200 points; quizzes 100 points, performance tasks/projects, and labs 100-200 points; and homework/classwork in 10-point increments. The handbook also outlines the GPA weights of AP/ECE, honors, and college preparatory classes in addition to grade range breakdowns for quarterly reporting. In 2015, all stakeholders made the decision to change an A+ from 98% to 97% in order to align with other districts in Southeastern Connecticut. As evidenced on the Endicott Survey, 100% of staff indicated they felt as if school-wide grading and reporting practices are regularly reviewed and revised. During monthly PLC and IPLC meetings, staff members convene with their content- specific departments for the purpose of examining grading practices to ensure consistency amongst departments, and alignment with the curriculum and school handbook. Once a month, PLCs and IPLCs utilize the Stanford Calibration method to assess samples of student work for the purpose of aligning individual instructor's scoring. Utilizing this calibration model, along with developing the common grading scale, 95.8% of MSMHS parents indicated they were in agreement that teachers' grading practices are aligned with the school's beliefs about learning.

The School Improvement Committee, which is made up of students, parents, teachers, and other community members, meets regularly to discuss school practices including the grading system. Committee members discuss ways to better inform stakeholders of student progress and continue to ensure that grading practices are aligned with the school's beliefs about learning. One example of improving assessment practices with feedback from this committee is the implementation of required midterm exams for all courses before the winter break. This option was voted on by stakeholders and agreed to unanimously. The School Improvement

Committee will continue to examine the grading process closely to determine if there is a need for significant revision. The committee will analyze information on how students are performing on standards and also take into consideration new technology available to teachers for reporting grades.

Groups of teachers as well as individual PLCs regularly work to revise and improve school-wide rubrics. In 2013 and 2014, the Science Department, along with the administration, did extensive work to improve the Marine Science Rubric, Rubric 5, and Scientific Research Rubric, Rubric 4, respectively. These revisions were made to help focus the Marine Science Rubric using the Principles of Ocean Literacy to further connect student learning to the theme of MSMHS and ensure that students were becoming proficient in the area of marine science. For the Scientific Research rubric, revisions were made after meeting with the school's higher education partners, such as the United States Coast Guard Academy and the University of Connecticut. MSMHS staff decided that the rubric needed to encompass more than just investigative labs and include labs that students would encounter in their college classes. By creating a more general rubric, students are able to achieve proficiency in labs that require them to create, as well as those that require them to follow a particular method. As a result, the rubric's title of Scientific Inquiry was revised to Scientific Research.

Additionally, in 2014, MSMHS began a school-wide initiative to show that student progress in each of the 21st century learning expectations was being reported. The School Counseling Department, along with school administration, semiannually creates an Individual Competency Report that provides an average of student progress in each of the rubric areas. This report is sent home to the student and parents; an average of all students' progress is

compiled and reported on the school website, updated annually to track student and grade-level progress from year to year.

EXECUTIVE SUMMARY

MSMHS staff continuously employs a formal process, based on school-wide rubrics, to assess whole-school and individual student progress in achieving the school's 21st century learning expectations. The staff frequently communicates individual student progress in achieving the school's 21st century learning expectations to students and their families. The school also communicates school-wide progress towards achieving the 21st century learning expectations to the community stakeholders. Faculty regularly examine student progress towards meeting each 21st century learning expectation using a student rubric database. Every quarter at minimum, advisory teachers review individual progress with their student advisees. Every semester, student competency reports are created using this database, indicating individual progress towards achieving the school's 21st century learning expectations. These competency reports are mailed home to families. An overall summation of the school's progress towards the 21st century learning expectations is then published on the school website annually. The culminating assessment is the MSMHS Senior Graduation Portfolio demonstrating proficiency or above across each 21st century learning expectation as evidenced by their rubric rating.

It is a school-wide expectation for all MSMHS faculty to communicate to students the applicable unit-specific learning goals, as well as the 21st century learning expectations, which are assessed prior to the beginning and during the instruction of all units. Unit-specific goals, standards, and 21st century learning expectations are conveyed to students at the beginning of each unit. All teachers provide students with unit overviews on a course syllabus, on paper and digitally.

MSMHS, teachers consistently employ a range of assessment strategies, including formative and summative assessments, in each unit of study. While pencil-and-paper tests are

common, more innovative modes of assessment utilizing technology and online programs are apparent across all disciplines, made possible by the 1:1 digital environment of the school. It is the norm for all MSMHS faculty to provide and review rubrics and scoring guides for assessments prior to the beginning of student work on assignments. Rubrics and scoring guides are provided with assessments to inform students of performance expectations, allowing students to measure their progress and performance with relation to the standards. Grading and reporting practices at MSMHS are regularly reviewed and periodically revised to meet the needs of faculty, students, and community. From one such review, a universal grading system was created and is outlined in the MSMHS Handbook that explains specific point values for various types of assessments.

All MSMHS faculty collaborate regularly in formal ways on the creation, analysis, and revision of formative and summative assessments, including common assessments. Regularly scheduled meetings of PLC and IPLC provide faculty with numerous opportunities to discuss assessments, including formative and summative. Teachers and administrators of MSMHS, individually and collaboratively, examine a range of evidence of student learning for the purpose of revising curriculum and improving instructional practice including student work, common assessments, individual and school-wide progress in achieving the school's 21st century learning expectations, standardized assessments, survey data from current students and data from sending schools. All subject areas are required to create and administer a minimum of one summative common assessment for each unit of study per course. Student work from the common assessments is gathered and examined by teachers according to a standardized protocol during PLC meetings. School-wide rubrics are frequently used to assess individual student work.

The examination of student work is pervasive across the school. In the academic schedule, one PLC meeting per month is dedicated to a review of student assessment results. Teachers at the MSMHS work hard to provide specific, timely, and corrective feedback to ensure students revise and improve their work. Consistent with a school-wide policy implemented in 2013, teachers enter grades into PowerSchool on a weekly basis. Teachers also provide ongoing specific individual feedback through informal formative assessments using both written and verbal communication to help students in their learning. Professional staff uses assessment data to identify and respond to inequities in student achievement. A team of faculty, staff, and administrators have worked hard to design and implement an SRBI Roadmap, delineating a set of steps taken for student interventions in order to ensure student achievement.

Based on the NEASC Committee on Public Secondary Schools (CPSS) Rating Guide for the Standard on Assessment of and for Student Learning, MSMHS judges its adherence to the Standard as **EXEMPLARY**.

Strengths:

1. The employment of school-wide rubrics to track student achievement of 21st century learning expectations
2. The semiannual student competency report to communicate school-wide and individual proficiency in 21st century learning expectations to all stakeholders
3. The effective vehicles in place to assess student needs and personalize assessment practices
4. The formal process (SRBI Roadmap) used by the SRBI Team to respond to inequities in student achievement
5. The scheduled PLC time during the school day to facilitate assessment creation, review, and revision

6. The IPLC meeting time during the school day to foster assessment discussions across academic departments
7. The communication by the teachers in both the written curriculum and course syllabi of specific learning outcomes and goals for individual units of study
8. The use of a wide variety of summative assessments and assessment-specific rubrics
9. The use of a wide variety of formative assessments to inform instruction, including student self-assessments and reflection
10. The use of common summative assessments in each course
11. The school-wide grading scale for assessments outlined in the Program of Studies and all course syllabi
12. The written curriculum noting the formative and summative assessments used in each unit of study for all courses
13. The professional development from Stanford University (delivered by two trained faculty members) in rubric calibration to improve assessment practices
14. The creation of a math lab to offer extra help to students to ensure comprehension for assessments
15. The use of peer support to review and revise assessments through NHS tutoring
16. The regular review of grading practices by the School Improvement Committee to ensure alignment with core values and beliefs
17. The use of Learning Walks to inform and adapt assessment practices to improve student learning
18. The use of student survey data in individual classrooms and by grade levels (i.e. Freshman Survey) to improve instructional practice and assessment creation

19. The integration of technology resources to assess students' mastery of content
20. The demonstration of student competency in 21st century learning expectations with the completion and presentation of a graduation portfolio

Needs:

1. Develop a more formalized five-year review cycle for school-wide rubrics
2. Incorporate alumni survey results to improve instructional/assessment practices
3. Research and obtain a more effective database system to support rubric collection and data analysis

MARINE SCIENCE MAGNET HIGH SCHOOL 2016 SELF-STUDY REPORT



STANDARD 5: *SCHOOL CULTURE AND LEADERSHIP*

RATING: EXEMPLARY

Standard 5: School Culture and Leadership

NARRATIVE

The Marine Science Magnet High School has consciously and continuously built a safe, positive, respectful, and supportive culture that fosters student responsibility for learning and results in shared ownership, pride and high expectations for all over the years. Marine Science Magnet High School (MSMHS) was founded as a collaborative partnership and has kept that tenet at the forefront of its work with all stakeholders. From the onset, collaboration has been stressed, with all stakeholders an integral component of the decision making process. School culture and climate were addressed during the first staff professional development activity before the school opened in the fall of 2011 and both remain a priority. MSMHS has received considerable positive feedback from parents, students and teachers regarding the school culture and climate. The Endicott Survey results indicate that 97.9% of the students feel safe at school and 89.5% of the students agree that the students respect the teachers. The Endicott Survey also reports that 95% of the students agree that the teachers respect the students and 88.7% agree that students respect one another. MSMHS has many active programs in place that serve to improve the school climate. The Principal leads a School Improvement Committee comprised of eight parents and eighteen students. This committee reviews topics and issues relevant to school improvement. The Principal also regularly consults teachers in regard to the MSMHS culture and climate, and further refines suggestions with the Principal Advisory Committee, a committee comprised of one third of the teachers and staff. During the 2013- 2014 school year, these committees worked to revise the school attendance policy, and during the 2014-2015 school year, they worked to revise the school-wide late-work policy, review and implement cohesive online gradebook formatting, and ensure alignment of grade-point averages with national

markers. The School Improvement Committee, along with the Principal Advisory Committee, also worked together to design and implement midterm exams for all courses in 2014. The Executive Board of Student Council organizes various school-wide forums for students to voice their opinions on a range of topics such as Field Day and other school activities.

The MSMHS Diversity Team promotes a diverse school community and initiates discussion on topics of culture, community, and race. The school's Unity Club organizes events to promote awareness of lesbian, gay, bisexual, transgender, questioning, and asexual topics, and also hosts a celebration of National Coming-Out Day and recognition of the Day of Silence. Students outside the club show overwhelming endorsement and participation from signing a pledge to wearing symbols of support. Other programs that serve to promote a positive school climate and sense of pride in ownership include, but are not limited to: a National Honor Society-sponsored tutoring program, peer mediation program, multicultural club, and an internship program. Elected class officers organize class events. Further opportunities for student leadership are encouraged.

MSMHS fosters a climate in which students take ownership and responsibility for their learning in a variety of ways. The Endicott Survey results show that 94.5% of students agree that their teachers are concerned about their learning and 96.8% of the staff agree that the school's culture supports independent student learning. An overwhelming majority, 100% of teachers and 99.2% of parents, agree that teachers support students in assuming responsibility for their learning. Student Ownership Rubric, Rubric 8, indicates, *student takes responsibility for learning and his/her own behavior*. Thus, students need to prove proficiency in terms of responsibility and ownership at their Senior Graduation Portfolio presentation during their senior year. This is a graduation requirement in which students reflect upon evidence proving academic

growth and proficiency of the 21st century learning expectations throughout their four years at MSMHS. Students begin collecting work samples during their freshman year. This requires extensive commitment and responsibility from the student in terms of long-term planning and tracking of their mastery of the learning expectations. To support this, the MSMHS Principal facilitates after school workshops to aid students in the compilation of their Senior Graduation Portfolio.

The Senior Graduation Portfolio presentation itself is led by each student, further underscoring the importance of the student's taking ownership and responsibility for his or her own learning. Prior to the students' portfolio presentations, responsibility for learning is tracked through the use of Student Success Plans. These goal-setting forms are created and revised during advisories throughout all four years at MSMHS. There are a wide variety of opportunities for students to seek extra help. Students have access to the math lab for thirty minutes every morning where they can seek individualized math support from the department. Students have additional faculty supports as well as tutoring from the National Honor Society available during study hall.

MSMHS provides all students with a laptop for use in and out of school, promoting their ability to contact teachers via email to request additional instruction, or seek missed information and lessons due to absences. For students who cannot afford internet access at home, the MSMHS PTO provides funding to the Principal's Discretionary Fund to cover the cost of installation and monthly fees. MSMHS provides many avenues for students to pursue their own learning through the school's internship program, Early College Experience and Advanced Placement courses, and various community partnerships that extend beyond school walls (Mystic Aquarium and Project Oceanology). Overall, student responsibility for learning is one of the

most emphasized character traits within the school's Core Values Statement: *We provide students with the opportunities to develop the skills and character necessary to be active and responsible citizens in a global community.*

MSMHS promotes high expectations for all students. Results from the Endicott Survey show that 93.7% of students agree that they have a number of opportunities to take courses in which students of varying levels of ability are enrolled. According to the Endicott Survey, 100% of the staff agrees that the school requires every student, over the course of their high school experience, to enroll in a minimum of one heterogeneously grouped core course (language arts, social studies, math, science, or world languages). Students are actively encouraged to take the AP, ECE, and honors classes that are accessible to all students. In the 2015-2016 school year, 93% of seniors and 83.2% of all MSMHS juniors are enrolled in an AP or ECE course. Students must complete graduation requirements that include a rigorous science program (beginning freshman year) and a Senior Graduation Portfolio that demonstrates student growth and proficiency in each of the nine competencies included in the school's 21st century learning expectations. Students must also show evidence of the successful completion of 40 hours of community service to meet the tenth 21st century learning expectation.

The Endicott Survey results show that 94.5% of the students are proud of their school. The survey also shows that 99.2% of parents and 96.8% of staff agree that the school's culture is safe, positive, respectful and supportive. MSMHS provides an annually updated handbook to students and parents at the start of each school year. The handbook is also electronically accessible on the school's website year-round. Additionally, the handbook contains the Acceptable Use Policy requiring parents and students to read and accept the expectations that the school sets for students' responsible use of technology. Discipline and

attendance policies are outlined in the handbook and are also explained to students by administrators and teachers at the onset of each school year and during school-wide meetings, held twice a week in the Great Hall throughout the year. MSMHS has taken a multi-pronged approach in creating, implementing, and adjusting school-wide policies by seeking feedback from the entire school community including parents, teachers, administrators and students.

MSMHS is equitable, inclusive, and fosters heterogeneity where every student, over the course of the high school experience is enrolled in a significant number of heterogeneously grouped core courses. In accordance with the philosophy of an inter-district magnet school as defined by the Connecticut State Department of Education to “voluntarily reduce racial, ethnic and economic isolation,” MSMHS values heterogeneity and inclusion. Students are selected through a blind lottery system. There are no merit-based requirements for a student to be eligible for enrollment; the only requirement is to reside in Connecticut. Because of this, students from a variety of academic and economic backgrounds are brought together. The 2015-2016 student body includes students from 26 different districts in eastern Connecticut. Beginning with student orientation, freshmen are heterogeneously grouped into an advisory that meets and works toward personal, academic, social and career goals. Students remain in their advisory during their entire tenure at MSMHS.

The Endicott Survey data for MSMHS indicates that 93.7% of students and 91.5% of parents agree that there are a number of opportunities for students to take courses with students of varying ability. All freshman students are enrolled in a majority of heterogeneously grouped courses, including English I, Civics and Environmental Stewardship, Biology, Integrated Science I, Spanish I or II, and Marine Studies I. In their sophomore year, students take Chemistry, Marine Studies II, and Spanish II or III, which are heterogeneously grouped. In their junior and

senior year, students have the opportunity to take more heterogeneous courses, including Aquaculture and Resource Management, Aquatic Husbandry, Aquarium Science, Marine Technology, Field Research, Forensics, Algebra Prep, Algebra I, Geometry, or Topics in Math and Coastal Navigation. Special education help is available in most of these classes using a co-taught model to foster inclusive teaching.

According to the Endicott Survey, 100% of staff agree that the school requires every student, over the course of the high school experience, to enroll in a minimum of one heterogeneously grouped core course. Students who want to explore deeper into course content have the option of taking Honors level, Advanced Placement, and UConn Early College Experience (ECE) courses. UConn ECE courses provide students with the opportunity to take university courses and earn college credit while in high school. MSMHS has a unique partnership with the University of Connecticut in that the school offers fourteen ECE courses. Moreover, sophomore students have the opportunity to take World Maritime History, related to the school's magnet theme. All AP and ECE courses are open to enrollment for all students who have met prerequisite course expectations. Students whose grades do not meet the prerequisites, may write an appeal for admission to the course. Based on a discussion with the school counselor, advisor, student and teacher, the prerequisite may be waived. MSMHS covers the fees to ensure equitable access for all students enrolled in UConn ECE or AP courses who qualify for the federal free or reduced price lunch program or whose family are in financial need. Furthermore, MSMHS helps families in need by utilizing resources from the PTO funded Principal Discretionary Fund to cover additional test fees.

MSMHS has a formal, on-going program through which each student has an adult in the school, in addition to the school counselor, who knows the student well and assists the student to

achieve the school's 21st century learning expectations. The MSMHS Advisory Program is a critical element in maintaining the healthy culture and climate of the school. The advisory program connects students to the 21st century learning expectations as determined by the academic, civic and social competencies. Students first experience advisory at MSMHS during ninth-grade orientation in the spring of their eighth-grade year, and again when they return for orientation in the summer. The advisor is the student's primary school contact. Whenever an issue with a student arises, the student's advisor is notified and involved. Whether winning an award, dealing with discipline, or assisting with the graduation portfolio, advisors stay connected with their students. They meet approximately 40 times over the course of the school year, every Tuesday and Friday, for 40 minutes each session. On average, there are 13 students in each advisory, purposely grouped to ensure heterogeneity. Each advisor makes a home contact every academic quarter (at least 4 times per year) to update parents about their child's progress, advise of any concerns that may exist, or share any celebrations. The consistent meeting time twice per week for all four years fosters significant connections among the students and with the advisor, who is a teacher at the school. Additionally, during the course of the year, an advisory session is dedicated to students completing an "Academic Advisement Protocol Sheet," where they can identify other teachers or staff whom they consider a support in the school. Some teachers track this information in a spreadsheet to have on hand in the event a student demonstrates a need for a trusted adult.

The advisory program is fundamental to the academic and social growth of individual students as indicated in the Endicott Survey in which 96.6% of students agree that their school has a program which provides them an adult in the school, in addition to their school counselor, with whom they meet with regularly and who knows them well. Furthermore, 92.8% of parents

responded that the advisory program provides their son/daughter with an adult in the school, in addition to his/her guidance counselor, with whom he/she meets regularly and who knows him/her well. Staff responded with 96.8% agreement that they actively participate as an advisor/mentor in the school's formal program to personalize each student's educational experience.

There are advisory sessions that are grade-level specific, sessions where advisories combine to meet where grade levels can be mixed based on the topic, and whole-grade level advisory sessions. There are also times where all advisories discuss the same topic during that block, such as addressing school bullying, creating Student Success Plans, defining Angela Duckworth's concept of Grit, and preparing for school-wide events such as Field Day. Additionally, MSMHS seniors have created and presented sessions on mental health, stress management, keys to success at MSMHS, and gender identity, to name a few. There are sessions that provide the opportunity to have a check-in/status check to see how the students are managing. The advisory program relies on frequent feedback and input from the advisors and advisees to determine the success of the sessions, any suggested adjustments, and additional community needs as they arise. During senior year, the last quarter of school year advisory time is dedicated to graduation portfolio work, in preparation for student portfolio presentations prior to graduation. In May of their senior year, before a committee, MSMHS students demonstrate their achievement of proficiency on the 21st century competencies as measured by the school-wide rubrics. The MSMHS Advisory Program provides the best opportunity to connect the community and collect feedback. As a result of that input, together with the comments of parents and other community stakeholders, staff works to assure that those suggestions are integrated into the advisory program.

The MSMHS advisory curriculum is predicated on the principles set forth by the College Board's Big Future program. That framework contains the following four dimensions: Cognitive Strategies, Key Content Knowledge, Academic Behaviors, Contextual Skills and Awareness.

In advisory, students monitor their progress under the guidance of their advisor, develop behaviors that lead to success in school and life, and are provided with the resources they need to make thoughtful decisions about their future. The advisory sessions focus on student learning outcomes aligned to four goals: to help advisees reflect upon and monitor their academic progress through a formal conferencing structure; to develop and maintain relationships between and among advisees and the advisor; to help advisees identify and develop the necessary attitudes, behaviors and skills to succeed in school, college and life; and to provide advisees with the resources and information necessary to make thoughtful decisions about the future. Many of the traditional school counseling tasks are addressed and managed by the advisor in collaboration with the school counselor. Academic conferencing around individual student progress and the Student Success Plan happen regularly throughout the school year in advisory.

Another key component of the advisory curriculum is the infusion of a core set of non-cognitive factors: Grit and Mindset. MSMHS utilizes the research of Angela Duckworth, from the University of Pennsylvania, to infuse the school community with the concept of Grit. In addition, the research of Carol Dweck, from Stanford University and her work on *Mindset – The Psychology of Success*, has been integrated into the advisory curriculum. Dweck's book, was a 2014 summer reading assignment for the entire community of students and faculty, and the 2015 summer reading assignment for new students and staff. The notions of mindset and grit are continually referenced when addressing students in the Great Hall, in all classrooms, in advisory,

in discipline conferences, PPT meetings, and where it is appropriate to discuss the importance of these life skills.

In order to improve student learning through professional development, the principal and professional staff, engage in professional discourse for reflection, inquiry, and analysis of teaching and learning, use resources outside of the school to maintain currency with best practices, dedicate formal time to implement professional development, and apply the skills, practices, and ideas gained in order to improve curriculum, instruction, and assessment. The Endicott Survey results indicate that 100% of the MSMHS staff are in total agreement that the school's professional development programs enable teachers to acquire and use skills to improve instruction and assessment; 100% of MSMHS staff also are in total agreement that input from supervisors who are responsible for evaluating their teaching plays an important role in improving their instructional practices.

The MSMHS Principal and professional staff engage in professional discourse for reflection, inquiry, and analysis of teaching and learning. The Principal and Dean of Students conduct both formal and informal evaluations and observation of teacher instruction and common practice throughout the year. A common and welcome part of the school culture is for the Principal or Dean of Students to drop in and get involved in daily classroom activities. Teachers submit their monthly lesson plans to the Principal for review. The Principal and the Dean are on the Scientific Research-Based Intervention (SRBI) Team, which engages every other day in professional discourse regarding at-risk students and strategizing solutions to promote success. Teachers also engage in collaborative reflection through their participation in Professional Learning Communities (PLCs) and Interdisciplinary Professional Learning Communities (IPLCs). PLC and IPLC schedules are developed each quarter, addressing these

four topics: Assessment, PLC Learning Walks, Curriculum Review, and Stanford Calibration Method. Teachers determine the order in which they will discuss the topics and decide which PLC member will lead the discussion. Documentation of these weekly PLCs and IPLCs is sent electronically to the Principal. The Principal or Dean of Students is present at all IPLC meetings and plays an active role in facilitating discussion among faculty.

Teachers frequently use resources outside of the school to maintain professional currency with best practices as well as foster community relationships that enhance the content of the curriculum. Examples of outside relationships of MSMHS teachers with community organizations are Mystic Seaport, Mystic Aquarium, Roger Williams University, New England Science and Sailing, the United States Coast Guard Academy (USCGA), and the University of Connecticut. MSMHS also takes full advantage of professional development opportunities available through LEARN's staff and resources; for example, MSMHS staff participated in LEARN professional development on the topics of objective writing, lesson planning, and Common Core reading strategies.

The MSMHS Principal and professional staff dedicate formal time to implement professional development. All Early College Experience (ECE) teachers are trained at the University of Connecticut, and attend professional development offered by the UConn faculty. All AP teachers attend AP training, commonly at the Taft Institute in Watertown, Connecticut. Each year the MSMHS Teacher of the Year has the opportunity to attend a conference of their choice; for example the 2015 MSMHS Teacher of the Year attended the National Science Teachers Conference in Chicago. Other teachers and staff are encouraged to attend professional development opportunities relevant to their content; for example two social studies teachers attended the ADL Echoes in Reflections Seminar at Connecticut College, and

one of the MSMHS aquaculture teachers attended the Marine Technology for Teachers and Students at the University of Rhode Island, in collaboration with The University of Connecticut. Two teachers received training in rubric calibration at Stanford University's Stanford Center for Assessment, Learning and Equity (SCALE), and presented a staff development session to MSMHS faculty. One social studies teacher participates regularly in professional development offered at Mystic Seaport.

The faculty and MSMHS Principal consistently apply the skills, practices, and ideas gained in order to improve curriculum, instruction, and assessment. Leadership has incorporated the sharing of ideas from workshops and conferences into faculty meetings, where teachers help each other bring new strategies into their classrooms. New skills and strategies are implemented collaboratively through PLC and IPLC meetings, as well as through individual discussion between administrators and teachers. As an example, the Stanford Calibration professional development became a regular practice in PLC meetings for rubric calibration. The MSMHS Principal recognizes practices among individual teachers through observations and brings them to the faculty meetings or a professional development session to share best practices and implement these effective strategies across the curriculum.

At MSMHS school leaders regularly use research-based evaluation and supervision processes that focus on improved student learning. The LEARN evaluation and supervision plan is referred to as the "LEARN Educator Development and Performance Plan: A Process of Support and Evaluation for All LEARN Professionals." The plan was derived from a collaborative effort between principals, assistant principals, and teachers with an interest in strengthening the evaluation and accountability model. The Principal and two teachers are members of the LEARN District Teacher Evaluation Committee. The model is aligned with state

law and core requirements for evaluation. It was drawn from Connecticut's System for Educator Evaluation and Development (SEED), the experiences of the Teacher Education and Mentoring (TEAM) program, current research on best practices, and the wisdom and practical experience of the educators in the LEARN organization. It is also grounded in the LEARN Model of Continuous Improvement supporting the development of teacher skill, knowledge, understanding and practice. The purpose of the educator evaluation is to improve and support high levels of achievement for all students by supporting and strengthening teacher and director performance and practice. The LEARN Educator Development and Performance Plan is grounded in a theory of action of growth and continuous development.

The purpose of the evaluation model is to evaluate teacher performance fairly and accurately and to help each educator strengthen his/her practice to improve student learning. The process of evaluation has four purposes: to increase student learning, to promote effective teaching, to enhance school improvement, and to provide for accountability in the educational system. The plan connects student achievement and aligns with professional development and school improvement. The plan's four design principles are interdependent; each is critical in determining that evaluations meet the needs of teachers, school leaders and students: Focus on Student Learning, Multiple Measures of Performance Data, Evaluation Outcomes with Significance, and Support, Professional Development, and Regular Feedback. The LEARN process requires that teachers self-assess using the Connecticut Common Core of Teaching (CCT) rubric and collect and reflect with their administrator on documentation and artifacts relative to effective practice as defined in the domains. Observations by administrators are a key data source for this category. Through the related conferences, teachers are encouraged to examine their goals and strategies and to self-identify areas of teaching to improve and consider

how these teaching expectations relate to their student learning goals, professional needs and classroom practices. The plan calls for beginning teachers (years one and two with LEARN) to receive at least three formal in-class observations. Two of the three include pre-conferences and all include post-conferences. These observations may be announced or unannounced. Teachers in year three and above “receive a combination of at least three observations of practice, one of which must be a formal in-class observation” according to the LEARN Educator Development and Performance Plan. The other two consist of one informal observation of practice and one review of practice, such as an observation(s) of team meetings, coaching/mentoring other teachers, observation of the delivery of professional development to other teachers, review of lesson plans or other teaching artifacts. At any time an administrator may request or schedule additional full observations.

It is within the culture and climate of MSMHS that the administrators go above and beyond the required supervision and involvement to support the faculty. It is natural for the Principal and Dean of Students to be involved with students and teachers in the classroom on an informal basis. Their presence is welcome and supportive. For example, it is not unusual for the Principal to visit the Green Table in the Library Media Center when there is a student discussion going on to listen and get involved.

Between 2011 and 2015, members of the administrative team attended the following professional development conferences: Association for Supervision and Curriculum Development (ASCD) conference; Magnet Schools of America conference; School Law; Truancy; NEASC conferences and annual meetings; State of Connecticut conferences for Sexual Harassment, Standardized Testing, Culture and Climate, Bullying, and School Improvement; Pyramid Response to Intervention Workshop. Additionally, the MSMHS principal has

performed duties as Chairperson and Assistant Chairperson for NEASC Accreditation visiting teams. Both administrators have also received advanced training and certification from the Emergency Management Institute at the Federal Emergency Management Administration (FEMA). Administrators also use the following resources in the performance of their duties:

- *Getting Started-Reculturing Schools to Become Professional Learning Communities* (Robert Eaker, et. al.);
- *Teach Reflect Learn-Building Your Capacity for Success in the Classroom* (Pete Hall, et. al.);
- *Assessment and Student Success in a Differentiated Classroom* (Carol Ann Tomlinson, et. al.);
- *Strengthening Teacher Evaluation-Taking Action to Improve Ineffective Instruction* (Alexander D. Platt, et. al.);
- *Classroom Instruction that Works Research-Based Strategies for Increasing Student Achievement* (Robert J. Marzano, et. al.);
- *Writing: A Core Skill* (Education Leadership)
- *The Understanding by Design Guide to Creating High Quality Units* (Grant Wiggins, et. al.)
- *Classroom Instruction that Works-Research Based Strategies for Increasing Student Achievement* (Ceri B. Dean).

The organization of time at MSMHS supports research-based instruction, professional collaboration among teachers, and the learning needs of all students. MSMHS runs on an 84-minute A/B day block schedule which facilitates lab work and field research. Students also meet for two 40-minute advisory sessions per week. Teachers at MSMHS have at least one full block

of common planning time per week with their PLC, which assists common planning and discussions regarding student achievement data, curriculum, assessments and instructional practices. PLC members have time to discuss progress on their own Student Learning Objectives (SLOs) and track student progress on their academic competencies through student rubrics. During this time, teachers also participate in structured Learning Walks to observe fellow teachers using different examples of research-based instructional practices. The Learning Walks and subsequent discussions promote reflection on teachers' own practices and the opportunity to learn new strategies from peers. Teachers are encouraged to visit other teachers within their own discipline and from other departments; class-coverage is available if a teacher has a class during a lesson he or she wishes to observe. Three times per month before classes begin, teachers meet for an interdisciplinary PLC meeting, called the IPLC. The topics for these meetings are planned ahead of time and feedback forms are collected for administration to review immediately following the meetings; the feedback is also part of the teacher evaluation. Among the topics discussed are current unit topics, individual student progress, Learning Walk observations and instructional strategies. The faculty of MSMHS meets as a whole at least three times a month. The faculty meetings provide the opportunity to share important information relevant to the MSMHS staff, afford the occasion for professional development, and allow faculty to be invested in current and future initiatives. Teachers have modeled instructional strategies, such as the flipped classroom, and shared practices such as working effectively with PowerSchool. The faculty participates in Anti-Defamation League-sponsored workshops to improve school culture and climate, and other workshops led by guest educational professionals targeted to improve instruction. In addition, faculty engages in Common Core planning work and Science Department planning meetings. During these meetings, teachers receive professional

development and discuss current educational research that can be applied in classrooms.

Unanimously, 100% of the staff responded on the Endicott Survey that they agree that the school's professional development programs enable teachers to acquire and use skills to improve instruction and assessment, and 96.8% of staff agreed that the principal and other school-based administrators provide instructional leadership that is consistent with the school's core values, beliefs, and learning expectations.

To assure that the learning needs of all students are met, teachers, counselors, and administrators serving on the school's Scientific Research-Based Intervention (SRBI) Team meet every other day during a planned block of time to discuss individual students. Based on these meetings, decisions on students' social and academic needs are made and a plan to ensure student success is created. After school, teachers will often participate in counselor-led staffing meetings to support learning of students who have been identified as requiring direct and specific intervention. Moreover, teachers participate in PPTs with the Special Education Department, and 504 meetings with school counselors to support student learning and achievement. In order to streamline the process of gathering data and feedback from teachers, the Special Education Department, SRBI, and school counselors have created Outlook reminders and Google Forms that teachers can respond to after each class period for some individual students. This online feedback expedites the process of creating, maintaining or adjusting procedures in place to support and ensure student success.

In the 2013-2014 schoolyear, MSMHS implemented a plan for all students to have a study hall in their schedule, in response to student learning needs and stakeholder input. The study hall allows students more time in school to complete assignments, study for assessments, and meet for group work. Teachers can leave missing assignments, tests, and quizzes in a study

hall folder for students to complete at a designated test table monitored by faculty. In addition, the National Honor Society provide tutoring as requested during study hall for students who need help with assignments.

Student load and class size at MSMHS enable teachers to meet the learning needs of individual students. MSMHS has a teacher load and class size that allow for effective instruction and individualized learning. In 2015- 2016, the average class size is 14 students. The English Department average class size, 14.5 students; the World Language Department average class size is 14 students; the Math department average class size, 14.6; the Science Department average class size, 13.7 (Marine Science average was 12.9); the Social Studies Department average class size, 14.7; and the advisory program has an average of 13 students. In the 2014-2015 school year there were only three classes which had over 20 students. AP/ECE English Literature, Algebra II Honors and ECE Marine Science each had 21 students. In the 2015-2016 school year, only six sections have more than 20 students, 52 sections have between 16-20 students, 77 sections have between 10-15 students, and two sections are under ten students. In addition, MSMHS has 12 co-taught classes. According to the Endicott Survey, 96.8% of the faculty feels their student load and class size enables them to meet the learning needs to individual students; 98.3% of students and 95.9% of parents also that the class size enables teachers to personalize instruction.

The school values the interests of students who seek learning in specialized areas outside of mainstream courses; these classes are available even if roster sizes are low. Examples within the 2014-2015 school year include: Marine Science with four students, ECE Marine Biology with five students, Latin II with two students, Latin I with nine students, ECE Spanish with two students, and six students were involved in a senior internship. Examples within the 2015-2016

school year include: ECE Spanish with four students, Field Research with seven students, and 12 students are involved in a senior internship. The MSMHS Advisory Program, which is designed to make the overall education experience for every student more personalized, meets twice a week for 40 minutes with teachers serving as advisor for an average of 13 students. MSMHS meets the needs of student learning through small class sizes and teacher loads.

The MSMHS Principal, working with other building leaders, provides instructional leadership that is rooted in the school's core values, beliefs, and learning expectations. The Principal and the Dean of Students are an integral part of a leadership team that has created policy grounded in the school's mission, core values and instructional goals since the opening of MSMHS in the fall of 2011. Both administrators consistently provide instructional leadership firmly rooted in the learning expectations and core values of the school. MSMHS truly offers a safe, respectful and nurturing environment for all students and staff. MSMHS believes that effort creates ability and all students will succeed, and provides all students with the opportunities to develop the skills and character needed to be active and responsible citizens in a global community. The MSMHS Core Values, Beliefs and Expectations Statement is a living, breathing component of everyday life at the school. The Principal references the core values in morning meetings, teachers refer to them daily in the classroom. The "Effort Creates Ability" motto is prominently displayed in the Great Hall. The Core Values Statement is displayed in every classroom and common areas. Results of the Endicott Survey indicate that 98.3% of students believe the Principal is clear about what he wants the school to accomplish for all of the students. Furthermore, 98.6% of the staff believes the Principal and other school-based administrators provide instructional leadership that is consistent with the school's core values, beliefs and learning expectations.

The Principal's Advisory Committee (PAC) has met monthly since the school opened its doors. This team was established for the purpose of responding to school-wide student and faculty concerns, and is comprised of counselors, administrators, teachers, and office staff. One member of the committee acts as the key communicator with the faculty to ensure there is open communication and understanding. As changes or suggestions arise, there is collaboration to guarantee that school leadership is always connecting and embedding these changes to the school core values and beliefs.

The MSMHS Parent Teacher Organization (PTO) meets monthly. There is a uniquely high parent participation and involvement in the MSMHS PTO; over the course of the year over one-third of the parents attends a PTO meeting. At these meetings, the Principal provides school updates, shares information about upcoming events, and offers opportunities for present stakeholders to collaborate and provide input on current school issues. For example, parents are informed of school bullying prevention policies, and sign the anti-bullying pledge, along with students and staff. Parents also receive information similar to the staff, such as a presentation entitled "MSMHS By the Numbers," highlighting school-wide progress on meeting the school's learning expectations, demographic data, school safety and climate data, standardized test scores and rankings.

MSMHS faculty meetings are held for 90 minutes at least three times a month. This is a time for administration to update the staff on announcements, upcoming events, and professional development sessions. In addition, once a month, the faculty meeting time is designated for professional development. This time has been used in a variety of ways including the support of instructional strategies, literacy development, and cultural sensitivity training with the Anti-Defamation League. The professional development sessions for teachers enhances their ability to

ensure that the needs of all students are met, while maintaining a high level of academic rigor paired with a nurturing environment.

The Principal and the Dean of Students are also leaders of the SRBI Team that creates Student Intervention Plans (SIPs) for improvement in social, behavioral, and learning challenges. In addition to both administrators, the SRBI Team includes four general education teachers, two special education teachers, two school counselors, and a school psychologist. The team is led by the Principal who guides recommendations, and provides the structure needed to implement necessary interventions. Furthermore, in the fall of 2014, the Principal created the SRBI Instructional Assistant position to provide additional Tier II and III support to students who are struggling with the core curriculum using assessment data to inform interventions. The Principal also created the Literacy Support Teacher position to assist with more intensive literacy interventions.

The Principal and the Dean of Students meet individually with faculty members at the beginning of each school year to establish teacher SLOs. They also hold one-to-one meetings with teachers during the school year to assess progress toward these goals and dialogue with them following classroom observations. Feedback from the Principal on classroom observations, whether in writing or verbal, is immediate and specific. These meetings are consistent and formal. Furthermore, a formal end-of-the-year conference is held as well, allowing teachers to meet with administrators to review and reflect on instructional progress, successes, and challenges with their goals.

In the fall of 2014, the principal initiated IPLCs to further support the curriculum and students; as stated in the core values, the MSMHS "...professional learning community is committed to 21st century learning, promotes effort and ensures academic rigor through a

challenging curriculum responsive to the diverse interests of a broad spectrum of students.” IPLCs meet weekly for 30 minutes to discuss student progress, current unit topics, interdisciplinary curriculum connections and academic opportunities, Learning Walks, and at-risk freshmen. These discussions often carry over into teachers’ PLCs. In PLCs, teachers are empowered to lead and dictate the discussion in these weekly meetings.

Teachers, students, and parents are involved in meaningful and defined roles in decision-making that promote responsibility and ownership. The Endicott Survey results show that 100% of the teachers agree that teachers, students, and parents are meaningfully involved in decision-making to promote an atmosphere of responsibility and ownership. Teachers are highly involved in decision-making within the school and serve the school community in various ways. Some examples include: participation on the PAC, hiring committees, PTO, serving as club and class advisors, and providing teacher-led professional development on a variety of topics. The school’s faculty meetings are also highly dynamic and often involve faculty discussion and approval of various administrative decisions before they are implemented.

Additionally, the Endicott Survey shows that 87.5% of parents agree that they have opportunities to be involved in important decisions made at the school. Parents are actively involved in the MSMHS “family” and the parent perspective is routinely incorporated into school decision making. Parents and students alike are included on teacher-hiring committees, playing an active role in the hiring process. Parents also serve on the Safe School Climate Committee and the School Improvement Committee. During the 2013-2014 school year, the School Improvement Committee worked to revise the school attendance policy. During the 2014-2015 school year they worked to revise the school-wide late work policy, cohesive online gradebook formatting, and the alignment of grade point averages with national markers. The

PTO is also very active within the school community, raising thousands of dollars through its annual Adult Spelling Bee. The PTO donates these earnings to various school programs that may require supplemental funding such as the MSMHS Fencing Team, Debate Team, and the Ocean Science Bowl Team. The MSMHS PTO is also providing the funding to initiate a crew team and a sailing team in the near future.

The Endicott Survey results indicate that 91.6% of students feel they have input in important decisions made at school. In addition to including students on the School Improvement Committee and various hiring committees, the Executive Board of Student Council organizes school-wide forums for students to voice their opinions on a range of school issues. One representative from each advisory makes up the student council. For example, it was through student interest and effort that Field Day became an annual event at MSMHS. Students also hold class meetings, generally occurring several times per quarter, where class officers lead discussion on ideas for class fundraisers, activities, and school-wide events. These open forums allow all voices to be heard, and empower class officers to translate student feedback into direct decisions regarding programs and policy. For example, students had complete ownership for designing Field Day and its activities, including the parade and themes. Students also planned the schedule for the end of the year picnic to which incoming freshmen for the next school year are included as an initial welcome to the MSMHS community.

Student survey feedback is one of the greatest drivers for new course additions, and lead to the development and scheduling of courses such as Forensics (2014-2015), Honors Psychology (2014-2015), Field Research (2014-2015), and AP Psychology (2015-2016). Advisory also serves as a student leadership venue as MSMHS seniors have created and

presented program on such topics as mental health, stress management, keys to success at MSMHS and gender identity.

The school's focus on the culture of collaboration encourages teachers to exercise initiative and leadership that is essential to the improvement of the school. These efforts are primarily designed to increase student engagement and learning. Leadership is an expectation for each faculty member at MSMHS. For example, teachers are involved in the advisory program. Fifteen teachers serve as advisors for an after-school club or co-curricular activity. At MSMHS, any student or teacher may propose an idea for a club. Interested parties submit a proposal to administration and must have at least five participants and one faculty advisor. Within the past five years, this streamlined process has led to the creation fifteen clubs and four competitive teams.

MSMHS administration encourages teachers to lead professional development for the entire faculty and dedicates time at faculty meetings and professional development days for staff to share their expertise or new learning. Teacher-led professional development has included, but is not limited to: laptop training, Stanford Calibration, Accountable Talk, flipped classroom, SRBI, student interventions, Google Drive, PowerSchool, annotating, lab safety, new teacher orientation, library support, SBAC preparation, special education, ELL support, and marine science topics.

Teachers also demonstrate initiative in leading school improvement committees to enhance the rigorous curriculum. For example, the math lab was created by teachers to help students struggling in math. The lab is open every day before school and provides a time for students to meet one-on-one with a math teacher outside the classroom and receive additional support. Teachers also create their own office hours after school so that they can provide

additional help to students who may require time outside of class. Furthermore, teachers who identify an issue that needs to be addressed may meet with the Principal at any time, because of his open-door policy. There have been occasions where teachers have addressed a concern with the entire school body during a Great Hall meeting. Recent examples of teacher-led whole-school programs include recognizing National Coming Out Day, the Day of Silence, Hispanic Heritage Month, transgender discussions, and Stonewall Speaker discussions. Student leadership is again fostered as class officers propose fundraising idea to support their grade's fundraising goals and graduation activities. Class advisors then assist in the organization and facilitation of these events.

In the 2014-2015 school year, the SRBI Team demonstrated leadership by implementing a mandatory extra help study session for struggling students before midterms. Many teachers stayed after to help the struggling students during these study sessions. Other teacher-led initiatives to foster increased literacy skills includes a seminar class specifically designed to help students in reading and writing. This course was implemented in the 2015-2016 school year. Teachers requested this dedicated time and personnel to assist high-risk students to achieve grade-level literacy and the necessary strategies to overcome any skill deficits. Yet another staff initiative and a way to support IEP-identified social skills deficits, was the formation of three small groups which target the development of healthy relationships and alternative perspectives on potentially sensitive or emotionally debilitating situations.

A majority of MSMHS teachers participate on committees, and all staff are encouraged to pursue continued involvement in subsequent years. The school has cultivated a culture of innovation and improvement through teacher initiatives designed to increase student engagement in learning. Teachers have been instrumental in bringing several new elective courses to the

school. Examples include ECE offerings, field research, and honors courses. In addition, at least once per month, faculty meetings include a teacher-led discussion/presentation. As part of leading a PLC, teachers rotate the facilitator role in each PLC meeting, such as leading a Learning Walk to other teachers' classrooms. Teachers are also encouraged to attend Curriculum Academy during the summer. For example, teachers who attended this academy in 2015 were designated to train others in the curriculum-writing process. More than 50% of teachers at MSMHS are part of specific leadership committees, including the Principal's Advisory Committee, SRBI, and the Professional Development Committee. Other leadership opportunities include teacher participation in NEASC Committees, rubric revisions, TEAM mentors, and staffings/504 meetings. Teachers also serve as Aquaculture Director, Chemical Hygiene Officer, Union Representative, Curriculum Project Leaders, Advisory Project Leader, Technology Project Leader, members of the LEARN Technology Team, NEASC Chairs, and LEARN Teacher Evaluation Committee. These leadership opportunities have enhanced teacher development and proficiency, which, in turn, has promoted enhanced student engagement in learning.

The Marine Science Magnet High School schoolboard, superintendent, and principal are collaborative, reflective, and constructive in achieving the school's 21st century learning expectations. Results of the Endicott Survey indicate that 100% of the MSMHS staff agree that the MSMHS Governing Board, the LEARN Board of Directors, and the LEARN Executive Director support the process of achieving 21st century learning expectations. The MSMHS Governing Board is comprised of the district superintendents of four local school districts, the Executive Director of LEARN, and the Principal of MSMHS. The MSMHS Governing Board meets twice a year at MSMHS. In May 2014, the Governing Board members unanimously

elected the MSMHS Principal as the Board's chairperson. The Governing Board Superintendents represent the four districts involved in MSMHS during its inception, planning, and development, and as such are invested in supporting the school's efforts in achieving 21st century learning expectations. The MSMHS Governing Board approved the policies regarding curriculum and graduation requirements as proposed by the Principal, and is updated concerning student recruitment and the lottery process, student enrollment, external partnerships and community connections, and curriculum development.

As a magnet school, MSMHS is run by LEARN, the Regional Educational Service Center (RESC) for southeastern Connecticut, and also reports to the LEARN Board of Directors, comprised of school board representatives from each of its 25 member school districts. The chairperson of the LEARN Board of Directors is a signatory on the MSMHS graduation diplomas, as are the LEARN Executive Director and the school Principal. The MSMHS Principal attends the monthly LEARN Board of Directors meeting twice a year; one of these meetings is hosted at MSMHS each year affording board members the opportunity to meet and talk with students, tour the school, and receive updates and highlights about the school and its achievements from the Principal. The Board of Directors and MSMHS communicate and collaborate, working together to continually improve and expand the opportunities for MSMHS staff and students.

School superintendents from the LEARN Southeastern Connecticut districts also meet monthly at the LEARN offices in Old Lyme; at least once a year the MSMHS Principal presents to the LEARN Board. The Principal's presentation, highlighting the achievements and goals of MSMHS as a magnet school of choice for all students, also supports a collaborative effort among districts to offer 21st century learning opportunities to Connecticut students.

The MSMHS Principal works very closely with both the Executive Director and Associate Executive Director of LEARN. Through regularly scheduled meetings as well as frequent (daily) emails and phone calls, the Principal is in close communication with the LEARN administration. In addition, the MSMHS Principal serves on a number of committees and participates in various initiatives with the Executive Director and Associate Executive Director. The MSMHS Principal serves as the following for all LEARN magnet schools: Coordinator of the LEARN Safe School / Crisis Committee, Standardized Test Coordinator, and Title IX Coordinator. The MSMHS Principal also serves on the LEARN Professional Development Committee, Teacher Evaluation Committee, and Technology Committee. The MSMHS Principal was included on the LEARN administrative leadership team, attending the CAPSS (Connecticut Association of Public School Superintendents) four day Leadership to Maximize District Coherence Institute in 2015. The MSMHS Principal is also a contributing member of the Military Superintendent's Liaison Committee, a partnership between local military installations and school districts committed to supporting military families and their students. MSMHS hosted a meeting of this committee in March 2015. The Principal's contributions and involvements, with the support of the school's governing bodies and administration, promote collaborative, reflective and constructive steps in achieving the MSMHS 21st Century Learning Expectations.

The school board and superintendent provide the MSMHS principal with sufficient decision making authority to lead the school. MSMHS has leaders both in and out of the school that help inform and support the Principal's decision-making authority. The LEARN Board of Directors, in conjunction with the Executive Director, has consistently supported the MSMHS leadership model since July 2011, which provides the Principal with decision-making authority as well as the freedom to include key stakeholders in policy making. Also, utilizing this model,

leadership staff in the school help to inform the Principal of professional development needs. The LEARN Board of Directors and Executive Director have supported this decision-making process that enables the Principal to make both collaborative and unilateral decisions. For example, in May 2014, the Governing Board members unanimously elected the MSMHS Principal as the chairperson. The MSMHS Governing Board approved the policies regarding curriculum and graduation requirements as proposed by the Principal, and is regularly updated concerning student recruitment and the lottery process, student enrollment, external partnerships and community connections, and curriculum development. Furthermore, the Executive Director has granted the Principal authority to set school-wide goals, school-wide rubrics, and the core values that drive 21st century learning expectations. As a result of this leadership model, the Principal builds the school budget based on staffing, faculty and facility needs, and professional development. Every year the Principal drafts the budget, which he reviews twice a year with the LEARN Board of Directors, Business Manager, Human Resources Director, and Executive Director. Thus, the Principal has the freedom of determining how funds are distributed to best fit the needs of MSMHS.

The SRBI Team and PAC are the two leadership teams that work directly with the Principal to impact policy and decision making. Proposed modifications on policies and processes are brought to the entire faculty after they have been approved by these leadership teams and the Principal. These two teams are comprised of 15 teachers, representing 50% of staff that impact policy and decision making before proposals are submitted to the entire faculty. If required, the Principal takes the necessary steps to seek further approval from the Executive Director, Associate Executive Director, and LEARN Board of Directors. There have been a number of occasions where the Principal has suggested changes for MSMHS that have been

approved by the LEARN Board of Directors and the Executive Director. Some of these include, but are not limited to: the general mission and vision of policies and procedures that were solidified in July 2011; the school budget; the restructuring of sequential science courses; changes and additions of course offerings, including ECE/AP opportunities; and cell-phone use policy.

The Principal chairs the MSMHS Governing Board, leads curriculum revision, approves new courses, assists with course development, oversees the writing and revision of the student and faculty handbooks, conducts and manages teacher evaluations, and manages the hiring and dismissal process for faculty and staff. The Endicott Survey revealed that 96.8% of the MSMHS staff and 95.5% of parents agree that “the school board and superintendent provide the principal with sufficient authority to lead the school.”

EXECUTIVE SUMMARY

MSMHS has consciously and continuously built a safe, positive, respectful, and supportive culture that fosters student responsibility for learning and results in shared ownership, pride and high expectations for all over the years. From its onset, MSMHS has emphasized the importance of collaboration with all stakeholders as an integral component of the decision-making process. The MSMHS community serves to promote a positive school climate through the involvement and participation of all stakeholders in multiple clubs, committees, and programs.

MSMHS is equitable, inclusive, and fosters heterogeneity where every student, over the course of the high school experience, is enrolled in a significant number of heterogeneously grouped core courses. As a magnet school, heterogeneous inclusion is embedded in the lottery process, as students are randomly selected from multiple districts, with a variety of academic and economic backgrounds. Students are heterogeneously grouped into advisories, and all freshmen are enrolled in a majority of heterogeneously grouped courses, with opportunities for more in their sophomore, junior, and senior years. Special education support is available in several courses. Honors, AP, and ECE classes are options for students who excel in course content, with an appeals process in place to give an opportunity to students unable to qualify initially.

MSMHS has a formal, on-going program through which each student has an adult in the school, in addition to the school counselor, who knows the student well and assists the student in achieving the school's 21st century learning expectations. The MSMHS Advisory Program is a critical element in maintaining the healthy climate and culture of the school and connects students to the 21st learning expectations as determined by the academic, civic, and social

competencies. Advisories are small and advisors make home contact a minimum of four times during the school year.

In order to improve student learning through professional development, the Principal and professional staff engage in professional discourse for reflection, inquiry, and analysis of teaching and learning; use resources outside of the school to maintain professional currency with best practices; dedicate formal time to implement professional development; and apply the skills, practices, and ideas gained in order to improve curriculum, instruction, and assessment. MSMHS staff unanimously agree that the school's professional development programs enable teachers to acquire and use skills to improve instruction and assessment, and the administration responsible for evaluating their teaching play an important role in improving their instructional practices.

At MSMHS, school leaders regularly use research-based evaluation and supervision processes that focus on improved student learning. The LEARN evaluation and supervision plan used by MSMHS supports the development of teacher skill, knowledge, understanding, and practice. Through this evaluation model, teacher performance is evaluated fairly and accurately and helps each teacher strengthen his or her practice to improve student learning. MSMHS administration goes above and beyond the required supervision and evaluation process to support the faculty.

The organization of time at MSMHS supports research-based instruction, professional collaboration among teachers, and the learning needs of all students. Common planning time is embedded in the master schedule. Regularly scheduled PLC and IPLC sessions, and structured Learning Walks also enhance teacher instruction and professional development.

Small class sizes at MSMHS enable teachers to meet the learning needs of individual students and facilitate differentiation. Furthermore, small classes encourage and even enable effective instruction and personalized learning at MSMHS. The school's student-centered values promote the interests of students who seek learning in specialized areas outside of mainstream courses, with classes available even if roster sizes are low.

The MSMHS Principal, working with other building leaders, provides instructional leadership that is rooted in the school's core values, beliefs, and learning expectations. The Principal and Dean of Students consistently provide instructional leadership firmly rooted in the learning expectations and core values of the school. The MSMHS Core Values Statement is the heartbeat of everyday life at the school.

Teachers, students, and parents are involved in meaningful and defined roles in the decision making that promotes responsibility and ownership. All three constituencies are involved in decision making through participation on various committees. There are frequent opportunities for them to be involved in making decisions that impact school-wide practice. Due to the school's focus on the culture of collaboration, teachers are encouraged to exercise initiative and assume leadership roles essential to the improvement of the school. These efforts are primarily designed to increase student engagement and learning. The school has developed a culture of innovation and improvement through teacher initiatives designed to increase student engagement and learning.

The LEARN Board of Directors, Executive Director, and Principal are collaborative, reflective, and constructive in achieving the school's 21st century learning expectations. The Principal, LEARN Executive Director, and Associate Executive Director work closely to promote and support the 21st century learning expectations by maintaining frequent contact on a

variety of current and relevant issues. The LEARN Board of Directors and Executive Director provide the MSMHS Principal with sufficient decision-making authority to lead the school. The LEARN Board of Directors has consistently supported the MSMHS leadership model since July 2011, giving the Principal decision- and policy-making authority and the freedom to include all stakeholders.

Based on the NEASC Committee on Public Secondary Schools (CPSS) Rating Guide for the Standard on School Culture and Leadership, MSMHS judges its adherence to the Standard as **EXEMPLARY**.

Strengths:

1. The instructional leadership provided by the Principal through Great Hall Meetings, IPLCs/PLCs, faculty meetings, and Learning Walks
2. The formal, on-going, and relevant advisory program where each advisory is made of up peers from different backgrounds and an advisor, who meet consistently and stay together for all four years
3. The heterogeneous grouping throughout several course offerings
4. The variety of co-curricular activities available to students and supervised by faculty advisors
5. The collaboration of committees to make important decisions for the school, such as the School Improvement Committee and the Principal's Advisory Committee, which are made up of all stakeholders
6. The involvement and inclusion in decision making of all stakeholders that include administrators, faculty, staff, parents, and students

7. The variety of course offerings, including AP and University of Connecticut Early College Experience (ECE) courses
8. The regular home-school communication and contact through Principal emails, weekly newsletter, phone calls and emails from advisors at least four times a year
9. The collaboration opportunities for teachers built into the academic schedule (IPLCs and PLCs)
10. The leadership development, and principal's serving on a variety of committees for the school and the LEARN district; and providing professional development for the faculty
11. The strong collaboration and participation of parents, teachers, and administrators in the PTO
12. The outside partnerships with Mystic Aquarium, Mystic Seaport, the U.S. Coast Guard Academy, and University of Connecticut, used to help design curriculum and provide opportunities for students
13. The SRBI Team that meets regularly to ensure learning needs are met for all students
14. The small class sizes that ensure personalization of learning
15. The collaboration with and support from LEARN administration and the LEARN Board of Directors

Needs:

1. Provide additional professional growth opportunities for staff members to become project leaders within the school community
2. Explore additional opportunities for teachers to receive professional development from institutions of higher education and community partnerships

MARINE SCIENCE MAGNET HIGH SCHOOL 2016 SELF-STUDY REPORT



STANDARD 6: *SCHOOL RESOURCES FOR LEARNING*

RATING: ACCEPTABLE

Standard 6: School Resources

NARRATIVE

The Marine Science Magnet High School has timely, coordinated, and directive intervention strategies for all students, including identified and at-risk students that support each student's achievement of the school's 21st century learning expectations. Results of the Endicott Survey show that 91.6% of students agree that their school meets the needs of all students. The survey also reports that 100% of the Marine Science Magnet High School (MSMHS) staff feels the school has timely, coordinated, and direct intervention strategies for all students, including special education, 504, and other at-risk students, who support each student's achievement of the school's 21st century learning expectations. Of the parents surveyed, 92% agree the school has timely and coordinated strategies to meet the needs of all students. Upon entry to MSMHS, students participate in a formal, on-going advisory program. This is an opportunity for the same 10-14 students to meet with an adult, other than their school counselor, for 40 minutes twice a week. This group of students stays together for all four years of high school, creating a close-knit bond and safe space within the larger MSMHS community. Advisors are trained to monitor students' academic, social, and emotional well-being through a formalized advisory curriculum.

If students are struggling, there are a variety of school interventions and supports in place to ensure that individual needs are met. The Scientific Research-Based Intervention (SRBI) Team (also known as Response to Intervention/RTI), meets every other day for 84 minutes and is comprised of the administrators, the two counselors, the school psychologist, three general education teachers, two special education teachers and the Literacy Support Teacher. The purpose of this team is to identify students who are in need of more intensive supports beyond the Tier I instructional strategies. Research for the creation of the school's SRBI Team was based

upon the two-day professional development from Solution Tree, delivered by Austin Buffum and Mike Mattos, which was attended by the Principal, who previously served as a district-wide SRBI coordinator.

A unique roadmap specific to MSMHS was created by the SRBI Team in 2012 and updated in 2015. The SRBI Roadmap is used to guide the process of identification and planning for student needs. A staffing meeting is called by school counselors (sometimes generated through SRBI) regarding a specific student, which may address one or more of the following: review of academic standing, data collection, absences, behaviors, emotionality, progress update, student work, and prioritization of assignments. All of the student's teachers and other relevant faculty attend the staffing, which enables the team to create a plan for next steps moving forward. Once students are identified for either academic, social, emotional, or behavioral difficulties, Tier II or III supports are put in place through a Student Intervention Plan (SIP). Some of these Tier II and III interventions include: monitored study halls, teacher office hours, math or writing labs, peer tutoring through the National Honor Society, assigned supports with SRBI Instructional Assistant or the Literacy Support Teacher. Weekly data is collected from teachers on individual students through Google Drive, and SRBI monitors this progress. If a student is not showing improvement over time, the team will reevaluate the interventions in place and modify as determined. If the student continues to struggle, a referral to a planning and placement team meeting (PPT) may be requested to discuss more intensive educational supports.

PPTs are held regularly for those students with Individualized Education Plans (IEPs) and those students referred for special education services. As a magnet school with students from 30 sending districts, PPTs are scheduled by the student's sending district, with appropriate staff from the district, MSMHS, and LEARN's Student Support Services, along with the parent and

student, in attendance. The team discusses individualized supports and services based on students' disabilities and needs, and could lead to supports such as co-taught classes, a Seminar course, or other specific interventions. When the student's disability interferes with his/her ability to access the general education curriculum, an IEP is developed with the team. However, sometimes the team determines that a 504 plan is able to accommodate student needs without modification of the curriculum. School counselors are the case managers for students with 504 plans.

The MSMHS nurse's office is staffed during school hours; days are shared between two registered nurses on respective days of the week. The nurses serve on the school's Crisis Team, comprised of the Principal, the Dean of Students, two school counselors, and school psychologist. Crisis meetings are called when immediate attention is needed concerning an individual in the building. When a crisis arises, the trained staff will notify the Principal that the team needs to assemble. At this time, the necessary staff report to the Principal's office and the team shares all the relevant information. The team reviews the situation, discusses the appropriate course of action, and then assigns specific tasks to the members of the team for immediate action. For example, the next step to address the crisis may include contacting Emergency Mobile Psychiatric Services (211), 911, school resource officer, or Department of Children and Families among others. This team always responds with immediacy to ensure the safety of all individuals at MSMHS. Crisis meetings are documented by the Crisis Team to guarantee that all necessary stakeholders have been notified. Additionally, MSMHS also has a School-Based Health Center (SBHC) with a licensed nurse practitioner and medical assistant two days a week that provides full medical services including dental care, flu shots, strep tests, provision of prescriptions, sex education counseling and birth control. These timely, coordinated,

directive intervention strategies provide all students with a safe and welcoming environment while promoting their wellness and their ability to achieve the school's 21st century learning expectations.

MSMHS continually provides information to families, especially to those most in need, about available student support services. According to the Endicott Survey, 93.7% of students know whom to ask for help at the school if they have a problem. Similarly 91.5% of the parents surveyed stated that they believe the school provided information about available student support services, and 100% of the faculty responded that the school provides information to families, especially those most in need, about available student support services.

Support services personnel utilize 21st century technology to communicate with all members of the MSMHS community. Students and parents are able to digitally access grades and attendance through PowerSchool. The school's website provides a plethora of information about academics, news and events, and the school's dynamic calendar. Under the heading of news and events, parents and students have access to upcoming events, the latest newsletter, nurse/health services, lunchroom options, and the staff. Within the academic section, links are provided to the school's curricula, syllabi, program of studies, parent student handbook, and school-wide rubrics. Calendars and class schedules are also available on the school's website. In addition, access to health services, health insurance information, school health forms, and community health information are all available on the school website. On the MSMHS website, all stakeholders can access the Internet Acceptable Use Policy, the Parent and Student Pledge and the Medical Authorization forms, the school lunch information, all of which are available in both English and Spanish. Spanish-speaking staff members regularly provide assistance with translation and communication to our Spanish-speaking families.

MSMHS uses School Messenger, a telecommunications software, which is used to relay information via email. Phone messages are utilized to reach those without internet services. Advisors make quarterly phone calls to connect with their advisees' parents/guardians. The advisory phone calls provide valuable information to the parents as well as to the school staff, and certifies that student and family needs are being met. The Principal sends out a weekly email newsletter, *Fish Tales*, updating the community about school-wide events. The school also has a Twitter account and Facebook page. Families may also access the Library Media Center's internet-based research resources and supports, including the library catalog.

Although there are numerous opportunities for parents to acquire information electronically, support services personnel know that there are times when information is best delivered in person. Families are welcome to come to the Back-to-School Night and parent-teacher conferences. They are also encouraged to utilize the health services office or the school's counseling department in order to gather information about school-based or community resources, or to make an appointment with school counselors. The school counselors host parent information nights throughout the year for incoming 9th graders, post-secondary planning, financial aid, and Advanced Placement courses. In the 2014-2015 school year, the financial aid presentation was video recorded and made available on the MSMHS website for parents to view.

MSMHS continually promotes the SBHC as a resource for all students, with specific attention to those students in most need. Students are informed about the SBHC when they visit the nurse's office, at the beginning of the year meetings, presentations to parents at PTO meetings, and at recruitment visits to area middle schools. In addition, throughout the year,

MSMHS gears specific mailings and communication regarding the SBHC and available services for all students.

Student support services include a team of people to make certain that families are made aware of opportunities for student success. This team includes school counselors, a school psychologist, a literacy support teacher, nursing staff and administration, school-based health clinic APRN, and school-based clinical social worker. In addition to the myriad of intervention support, there are special education teachers, and two SRBI Instructional Assistants. In 2015, a literacy support teacher position was added to provide Tier II and Tier III interventions for students who have been identified as needing support with literacy.

The school works in conjunction with community programs to promote available jobs to students whose families qualify for free and reduced lunch. These same students are eligible for and receive fee waivers for standardized tests, many college applications, as well as Advanced Placement (AP) and University of Connecticut Early College Experience (ECE) course fees and materials. The availability of assistance for families with financial constrictions or under financial duress is regularly communicated with all students and parents. The school administration and staff work to ensure that families take advantage of every opportunity available to them. Included in the Principal's communication with the MSMHS family are regular reminders regarding available resources. The school community organizes a food drive prior to Thanksgiving to assure that MSMHS families in need receive a Thanksgiving dinner. Annually, MSMHS has provided over 25 complete Thanksgiving turkey dinners to MSMHS families.

The Parent Teacher Organization (PTO) at MSMHS is committed to providing financial assistance to any student or family in need. The PTO has funded a number of scholarships for

students to participate in the MSMHS Fencing Team, provided graphing calculators, and paid for other school supplies for students as well as the yearbook, prom tickets, field trips, driver's licenses, clothes for ceremonies, etc. Parents have been presented assistance with their transportation needs (gas money/bus pass/taxi service) to participate in a meeting for their child. In 2014, the PTO established a Principal's Discretionary Fund to enable the Principal to further assist any student with school-related expenses. The MSMHS culture creates a space where students feel comfortable seeking financial assistance. The principal encourages students to speak with him privately about their needs and uses his own life experiences as a powerful example for any student or family who may be struggling. MSMHS works extensively to provide information to all families, especially to those most in need, about all of the available student support services.

Support services staff regularly use a variety of technology to deliver an effective range of coordinated services for each student. MSMHS uses a 1:1 platform where each student and staff receives a laptop. The school-administered laptop facilitates the regular use of technology by support service staff. In the 2014-2015 school year a \$175,000 update to the MSMHS wireless system increased the efficiency in which coordinated services are delivered to each student. School counselors, special education case managers, the school psychologist, and administration utilize technology to communicate student needs, schedule annual meetings, and provide support to students.

School counselors regularly use Naviance, a comprehensive college- and career-readiness system. Naviance helps to align student strengths and interests to post-secondary goals, administer career interest surveys, support the college search process, track scholarship

applications and college applications. Students often access Naviance during Advisory as part of the developmental school counseling program.

PowerSchool, the MSMHS web-based student information system, provides a wealth of information. Attendance, grades, student and teacher schedules, health information including office visits, discipline logs, Individual Education Plans (IEPs), demographic data, and legal notices are stored in PowerSchool. All MSMHS staff routinely use PowerSchool to view, enter, and track data. Students, parents, teachers, and school staff have access to PowerSchool with varying levels of permissions to view information deemed relevant to their respective positions. School counselors use PowerSchool to create and modify student schedules. Scheduling students into classes, calculating grade point average, and creating transcripts are not yet automated processes and therefore, require a great deal of time from the school counselors.

School personnel routinely use email to communicate in a timely manner with one another, students, and parents. All staff email addresses and direct phone extensions are listed on the MSMHS website. In the 2015-2016 school year, all students and teachers received a Google account to use for school-related communication. School counselors occasionally employ Google Drive surveys to gather feedback from students. The school's library media center has 28 iPads, available for teachers and students, which offer hands-on, active learning opportunities.

Individual student performance toward meeting the school's 21st century learning expectations is maintained on the school's server. As of the 2015-2016 schoolyear, each student has a folder in Google Drive where his or her progress towards achieving proficiency or higher in each of the 21st century learning expectations is noted, along with the assignments. Prior to this schoolyear, individual databases were located on the school server. Teachers regularly update this Rubric Database and counselors summarize and disseminate this data to MSMHS

families on a semi-annual basis. Students have viewing access to their individual rubric database through Google Drive. School counselors create an individual competency report for each student and report data to stakeholders regarding class-wide progress towards proficiency. This process is cumbersome and time consuming for teachers and school counselors. All stakeholders are invested in finding a more efficient way to store and access this data.

Marine Science Magnet High School's school counseling services have an adequate number of certified/licensed personnel and support staff who deliver a written, developmental program, meet regularly with students to provide personal, academic, career, and college counseling, engage in individual and group meetings with all students, deliver collaborative outreach and referral to community and area mental health agencies and social service providers, use ongoing, and relevant assessment data, including feedback from the school community, to improve services and ensure each student achieves the school's 21st century learning expectations. Two full-time school counselors serve 271 students at MSMHS. Each counselor is responsible for an equal distribution of students, who are divided by advisory groups in grades 9-12. According to the Endicott Survey, 92.4% of students said they are comfortable going to their guidance counselor, with 65.5% stating they meet with their counselor regularly. Also, 100% of staff indicated that MSMHS has sufficient certified/licensed counseling personnel and support staff, and believe that the school counselors meet regularly with all of their students and provide personal, academic, career, and college counseling services. An overwhelming 95.4% of parents indicate there is an adequate number of certified/licensed personnel and support staff for the school counseling services. Additionally, 85.1% parents indicate that the school counseling personnel meet regularly with their son/daughter to discuss personal, academic, career, and college planning. A written, developmental guidance program for all students is embedded in the

advisory program. A school counselor develops the advisory curriculum in collaboration with administration, teachers, and the community. The students are regularly surveyed for feedback on the advisory curriculum and changes are made based on their suggestions.

Counselors meet with students regularly to provide personal, academic, career, and college counseling. In the Endicott Survey, 65.5% of students are in agreement that they meet with their school counselor regularly. Counselor data indicates that 100% of students have met with their counselor at least one time. Moreover, 69% of students have met with their counselors three or more times. In the 2015-2016 school year, counselors created a schedule to attend advisories on a rotational basis. This regularly scheduled time for counselors to spend with their caseload in a small group setting will ensure that students are consistently meeting with their counselors. Counselors will also continue to plan night events to invite parents to MSMHS. These events include college planning presentations during parent/teacher conferences, financial aid workshops, and AP/ECE registration, in addition to scheduled individual parent meetings.

MSMHS collaborates with multiple local area services for student needs. When a student is involved with outside supports, MSMHS receives a signed release to collaborate effectively with the agency. This includes regular communication and updates regarding the status of the student both in and out of school, as well as attendance at PPTs or 504 meetings. These partnerships with outside agencies, such as Multidimensional Family Therapy (MDFT), the SBHC, Emergency Mobile Psychiatric Services (EMPS), 911, Department of Children and Families (DCF), and the Joshua Center's Partial Hospitalization Program help MSMHS utilize a more holistic approach to meeting student needs. MSMHS also partners with the SBHC and has a full-time social worker in the building that is employed by SBHC. The clinician meets with a full caseload of students weekly and provides more intensive and comprehensive supports that

extend beyond the scope of school-based needs. School staff refers students to the SBHC clinician when appropriate. The MSMHS Crisis Team meets and often draws on community resources such as EMPS, DCF, the SBHC clinician, School Resource Officer, and the school nurse to provide additional support in time of crisis.

School counselors look at a variety of data to assess and improve services. Counselors look at school-wide rubric data to analyze individual and school-wide growth in students' 21st century learning expectations. Counselors create competency reports for students semi-annually to reflect their growth in gaining 21st century learning skills. This data is also made available to the school community via the MSMHS website. School counselors support student achievement of the school's 21st century learning expectations by clearly outlining the process of creating the Senior Graduation Portfolio, which is an MSMHS graduation requirement. All students must reach proficiency across all nine school-wide rubrics which encapsulate the school's 21st century learning expectations. School counselors sit as part of a committee to which seniors present their portfolio at the end of their school year, demonstrating their proficiencies in each competency. The School Counseling Department also analyzes student ReadStep, PSAT 8/9, PSAT, SAT, AP, and ACT scores to determine appropriate placement in classes. Counselors meet with students to discuss score results and options for classes at MSMHS and at the postsecondary level.

The MSMHS health services have an adequate number of certified/licensed personnel to provide health services and direct intervention services. MSMHS has two part-time registered nurses who job share the position; both have a background in critical care. The Health Services office serves all MSMHS students. National guidelines require a nurse-to-student ratio of no less than one nurse to 750 students in the general population. According to the Endicott Survey,

100% of staff and 97.2% of parents agree that the school's health services program has an adequate number of certified/licensed personnel and support staff. Both school nurses provide direct, preventative, and ongoing care to students; results from the Endicott Survey show 92.2% of parents believe that student health services provides preventative health and direct intervention services. The majority of MSMHS students, 95.4%, indicate that they feel comfortable going to the school nurse. Ongoing care involves daily assessment of student needs, staff training and education about specific student medical conditions, and distribution of health plans for students. Both nurses serve on the Crisis Team and consult with administration, school counselors, and the school psychologist when appropriate. The health office tracks visits, immunizations, screenings, and flags students with health conditions through the PowerSchool health function. When appropriate, the school nurse attends PPT and 504 meetings to provide input and help create health plans.

The school also provides access to the SBHC, which is staffed by an APRN and a CNA who see students both by appointment and walk-in. Students registered for the School Based Health Clinic are able to meet with the APRN for a variety of health concerns. The APRN is able to prescribe medicine, administer immunizations and flu shots, conduct physicals, reproductive counseling, well child exams, and referrals to specialists. The SBHC and school nurse share an office and work collaboratively with one another. School nurses often refer students to the SBHC for issues like strep throat tests and nebulizer treatments. Both the SBHC and school nurses refer students and families to the following agencies: Community Health Center, primary care physicians, emergency room, DCF, the School Crisis Team, and Behavioral Health to assess mental health issues. The SBHC conducts patient satisfaction surveys and uses the feedback to improve services. The school nurses communicate regularly with the LEARN district nursing

supervisor for training and updates on health issues. School nurses then disseminate the information either through school-wide meetings or phone calls to parents/guardians at home. In addition, a variety of informative pamphlets are available in the health suite. Topics include: Pressure to Drink Alcohol; 50 Things You Need to Know About STIs; How to Insist on Condoms; 50 Things You Should Know About Tobacco; 50 Things You Should Know About Stress, Body Odor, Bad Breath and Smelly Feet; Self-Harm and Cutting; and 50 Things You Should Know About Eating Disorders. In 2014-2015, school nurses and SBHC staff led reproductive health discussions in response to student survey feedback. This was a change in practice and is an example of how the school nurse and SBHC staff use data to change practices to ensure that students achieve 21st century learning expectations. MSMHS has an adequate number of certified/licensed personnel and support staff who provide preventative health services and direct intervention services to all students; use an appropriate referral process; conduct ongoing student health assessments including vision and scoliosis screenings; and use relevant assessment data, including feedback from the school community, to improve services and ensure each student achieves the school's 21st century learning expectations.

Library/media services are integrated into curriculum and instructional practices and have an adequate number of certified/ licensed personnel who are actively engaged in the implementation of curriculum, provide a wide range of materials, technologies, and other information services in support of the school's curriculum, is open before, during and after school, is responsive to student interest and needs, and conduct ongoing assessment using relevant data, including feedback from the school community to improve services and ensure each student achieves the school's 21st century learning expectations. The Library Media Center was created during the 2014-2015 school year. Originally, the Library Media Center had one

full-time library media specialist. Beginning in the 2015-2016 school year, the position evolved into that of a Literacy Support Teacher. Based upon input received from George Edwards, Director of NEASC, a school smaller than 400 students does not require a full-time library media specialist. A new position was created to specifically work in the Library Media Center while also addressing the literacy needs discovered by the school's SRBI Team. This Literacy Support Teacher works directly with teachers and students to teach appropriate library science and research skills, collaborate with teachers to develop a balanced literacy program, and assist in obtaining materials to support the curriculum. The literacy support teacher is responsible for planning and implementing the school library information technology program; organizing the library media center to improve service and effectiveness by computerizing the book checkout system; supervising book checkout by teachers, staff, and students; and informing teachers and other staff members of new materials acquired in the media center. The literacy support teacher meets with a library media center specialist on a monthly basis for guidance and input regarding the maintenance of the library catalogue. During these meetings, they analyze the need for materials that support the curriculum and literacy skills. This helps to provide leadership in evaluating, selecting, ordering books and media materials matching upcoming themes and school needs and keep current with and serve as a resource on new developments in media instruction. The Literacy Support Teacher also works directly with the Social Studies and English Departments on their cross-curricular research papers to provide adequate materials and support. Evidence of this collaboration can be seen in the research projects, both written and digital. The Literacy Support Teacher actively participates in the administration of the school curriculum by attending Professional Learning Community (PLC) meetings and Interdisciplinary Professional Learning Communities (IPLC) meetings on a regular basis. The Literacy Support Teacher

assists teachers by finding additional resources to supplement the classroom curriculum, including but not limited to recent research data and literature in the sciences and humanities.

According to Endicott Survey, 65.3% of parents believe that the Library/Media Center provides a wide range of materials, technologies, and other information services, that fully support the school's curricula and their student's learning needs. Furthermore, 75.2% of student respondents agreed that the library has the resources they need. The Library Media Center maintains an online library catalogue. The Library Media Center also provides interlibrary loan access and maintains a close connection with the library at the University of Connecticut and the local public libraries. As of 2014, although every student has a laptop, the Library Media Center also provides students access to 26 iPads, 2 mini iPads, 15 desktop computers, and scanners. The Literacy Support Teacher also works closely with the Student Support Services department to provide audiobooks for students.

The Literacy Support Teacher is responsive to the students' interests and needs in order to support independent learning and help students reach the school's 21st century learning goals. The library has a total of 618 titles, 30 e-audio books, 12 e-books, and 467 print books. There is a plan to continue to expand the collection as the school grows. With the guidance of a consulting library media specialist, the literacy support teacher analyzes breadth and appropriateness of library materials by periodically synchronizing the collection to Follet's Titlewave site; utilizing a TitleMAP analysis; surveying teachers; and analyzing daily usage and check-out.

The Library Media Center's open concept and location enable faculty and students to utilize the center from 6:00 AM to closing at 7:00 PM. The center is also used for events such as class meetings and club activities. In addition, the Literacy Support Teacher leads a homework

club that meets for direct skill practice and other academic support on Tuesdays and Thursdays after school.

At MSMHS, support services for identified students, including special education, Section 504 of the ADA, and English language learners have an adequate number of certified/licensed personnel and support staff, provide an inclusive learning environment for all students, and use a host of assessment data, including feedback from the school community to improve services and ensure each student achieves the school's 21st century learning expectations. The Endicott Survey revealed that 100% of the faculty and 92% of the parents feel that the school has adequate, certified support services personnel for identified students, including special education, 504 and English language learners. At MSMHS, the support services provided for identified students, students with 504 plans and ELL students receive a significant amount of assistance based on the student's individual needs. These services are tracked through the student's IEP or 504 plan. A unique issue to a school such as MSMHS, serving students from numerous districts, is obtaining current student records in a timely manner. As a regional magnet school, it is challenging at times to obtain all student information in time for the commencement of the school year. Therefore, MSMHS communicates regularly with sending schools and makes necessary adjustments as information becomes available to ensure all students' needs are met.

The SRBI Team meets every other day for approximately 87 minutes. The SRBI Team consists of three regular education teachers, two special education teachers, two school counselors, the school psychologist, a literacy support teacher, the Dean of Students and the Principal. Teachers are aware of the role of the SRBI Team and the supports that can be provided for students. SRBI regularly reviews the students who have been referred and monitors the Student Intervention Plans (SIPs) that have been established to support these

students. Relevant information is shared with staff members who work with those students as well as their families. This collaboration happens consistently throughout the school year. Students identified as English Language Learners (ELL) prior to their arrival at MSMHS receive supports through an SRBI Instructional Assistant, literacy support teacher, special education teachers, Spanish-speaking faculty, and school counselors. Students who are exited from ELL continue to receive ongoing support to work toward achieving grade level performance.

The entire MSMHS faculty works as a team to support students' achievement of the school's 21st century learning expectations. Student progress on the achievement of the 21st century learning expectations is measured by the MSMHS academic, civic, and social competencies. During their Senior Graduation Portfolio presentation, students demonstrate proficiency on these competencies measured by nine school-wide analytic rubrics. Students are required to pass their portfolio assessment in order to graduate. Identified students, students with IEPs, 504 plans, and ELL students receive the requisite amount of support to complete their portfolio. Appropriate accommodations and modifications are provided for those students who need them. School counselors create competency reports for students each semester to reflect their growth in acquiring 21st century learning skills. This data is also made available to the school community via the MSMHS website. Each committee consists of a member of the MSMHS administration, a school counselor, and a faculty or staff member. The committee awards credit towards completion of the graduation requirement.

At MSMHS, all students are provided inclusive opportunities. For example, all 9th graders are heterogeneously grouped in classes, unless they are in an advanced level of mathematics. In addition, the majority of the course offerings are inclusive classes. There are a

number of identified students who take AP and ECE courses. Students are afforded additional inclusive opportunities through the many co-taught courses that are offered. Additional student supports have been created as a result of the discussions in the SRBI Team meeting relative to student needs. In 2015, MSMHS added a staff position of SRBI Intervention Specialist whose primary objective is to assist those students who need more intensive individual contact. An SRBI Instructional Assistant was also added in 2015, again providing individual students more intensive intervention during the student's study hall time most students have responded to this level of intervention. In the 2015-2016 school year, a literacy support teacher was added to address students' literacy deficit and deliver SRBI interventions for identified students. Additionally, as a result of departmental and SRBI Team discussions, the special education department decided to restructure the existing seminar class structure. In the 2015-2016 school year, students are grouped into seminar based on specific skill areas in which they require support and more explicit instruction. There are three separate focuses, Organization, Literacy, and Mathematics. MSMHS is continually evolving to ensure that all students have access to a supportive, inclusive, and productive learning environment to guarantee that each student achieves the school's 21st century learning expectations.

EXECUTIVE SUMMARY

MSMHS has multiple timely, coordinated, and directive intervention strategies for all students; continually provides information to families with emphasis on those most in need; uses a wide range of technology to deliver services; supports collaboration between counseling, school health services, and community agencies; and provides resources to support the school's curriculum and student achievement of the school's 21st century learning expectations.

The SRBI Team closely monitors student progress and works with school staff to ensure students are supported. As a result of initiatives developed by the SRBI Team, additional support staff and interventions have been implemented to better support students.

All members of the MSMHS community are continually provided with information regarding the school's support services. The multitude of communication include phone calls, emails, and in-person meetings. Emphasis is placed on connecting with those students most especially in need. Students' first-day-of-school packets include information regarding enrolling in the National School Lunch program and the School Based Health Clinic. Support services staff and the school nurses work to inform eligible students about physical and mental health options, employment opportunities, fee waivers, and all other applicable resources.

Support services staff regularly uses a variety of technology to deliver an effective range of coordinated services for each student. Technology is used on a daily basis by support service staff however, there are numerous opportunities to optimize the use of technology, and MSMHS is invested in maximizing available resources.

School counselors have an ideal caseload, deliver a written developmental curriculum through the Advisory Program, and provide personal, academic, career, and college counseling. In addition, counselors engage in individual and group meetings with all students, and when

necessary, deliver collaborative outreach and referral to community and area mental health agencies and social service providers.

Library and media services are integrated into curriculum and instructional practices. The Literacy Support Teacher maintains the library database and offers personalized literacy support to identified students and students who request assistance. Library media services provide a wide range of materials, technologies, and other information services in support of the school's curriculum, is responsive to student interest and needs, and conduct ongoing assessment using relevant data, including feedback from the school community to improve services. The school continues to expand the library resources.

Support services for identified students, including special education, Section 504 of the ADA, and English language learners have an adequate number of certified/licensed personnel and support staff who provide an inclusive learning environment for all students, and use a host of assessment data, including feedback from the school community, to improve services. Identified students are placed in heterogeneous classes and special education teachers as well as support services staff consult frequently with teachers to ensure that all students achieve the school's 21st century learning expectations.

Based on the NEASC Committee on Public Secondary Schools (CPSS) Rating Guide for the Standard on School Resources for Learning, MSMHS judges its adherence to the Standard as **ACCEPTABLE**.

Strengths:

1. The Scientific Research-Based Intervention Team which works extensively to ensure that the school has timely, coordinated, and directive intervention strategies for all students, using the structure provided from the SRBI Roadmap and Guidebook
2. The SRBI Team which continually examines the supports available to students, expanding intervention strategies and resources as appropriate
3. The school reports on individual student progress towards the school's 21st century learning expectations which is also available to all stakeholders through the school website
4. The School-Based Health Clinic's collaboration with school staff to ensure that students with limited financial means have access to physical and mental health resources
5. The Crisis Team's clear, delineated, collaborative, and well-documented process for managing mental health crises
6. The student/school counselor ratio that enables counselors to provide sufficient personal, academic, career, and college counseling
7. The school counselor schedule which facilitates individual meetings with every student on their caseload a minimum of once a year
8. The Advisory Program, a touchstone of the MSMHS student experience, which provides an avenue for delivery of important academic, career, and postsecondary planning information to all students
9. The school's efforts to ensure that students most in need of services are provided support specific to their needs
10. The Principal's weekly newsletter, *Fish Tales*, which communicates updates to the entire school community including alumni

11. The Principal's school Twitter account that provides timely and ongoing information to followers
12. The quarterly Advisory phone calls and emails made to each student's home by their advisor maintaining open lines of communication

Needs:

1. Research and implement a data management system that stores student rubric data and can report individual as well as class-wide progress towards achievement of the school's 21st century learning expectations
2. Optimize use of PowerSchool to create transcripts and maintain an accurate grade point average for students
3. Build a school counseling website that provides information about courses, the college application process, financial aid, and resources for mental health and social services
4. Expand the Library Media Center to include more materials and resources for students and staff
5. Continue to explore additional digital resources for the Library Media Center collection to complement the 1:1 technology platform at MSMHS

MARINE SCIENCE MAGNET HIGH SCHOOL 2016 SELF-STUDY REPORT



STANDARD 7: *COMMUNITY RESOURCES FOR LEARNING*

RATING: EXEMPLARY

Standard 7: Community Resources

NARRATIVE

The community and the district's governing body provide consistent and adequate funding for a wide range of school programs and services, sufficient professional and support staff, on-going professional development and curriculum revision, a full-range of technology support, sufficient equipment, and sufficient instructional materials and supplies for the Marine Science Magnet High School. As an interdistrict magnet school, Marine Science Magnet High School (MSMHS) is operated by LEARN, a Regional Educational Service Center (RESC), which serves as the district-level administration and support for the school. The LEARN Board of Directors, comparable to the Board of Education in traditional districts, is comprised of one representative from each of the 21 school districts within the LEARN RESC. According to the Connecticut Magnet Schools website, because many magnet schools are not run by a traditional district, they do not receive money through the traditional means of state funding, called the Education Cost Sharing (ECS) grant. The state of Connecticut reimburses magnet schools per pupil, but if the school is not run by a traditional district, the operator of a magnet school may charge the district where a student resides a minimal tuition to make up the difference between the state reimbursement and the cost of educating a student. Therefore, funding for MSMHS is provided by a combination of state funding and a tuition fee paid by sending districts. Funding of tuition costs, \$13,564 per student, for the 2014-2015 school year was 58% state: 42% sending district.

Currently, MSMHS requests tuition for 271 students from the state of Connecticut, approximately 20 more than originally planned in the development and design of the school. If state funding decreases, the school does not increase tuition to the sending districts but instead

would decrease the number of acceptances (seats) for the entering freshman class. Annual building budgets and tuition rates are determined by the LEARN Board of Directors, shared with the MSMHS Governing Board, and align with regional tuition rates for choice schools. The building budget increase between the 2013-2014 school year (\$3.5 million) and the 2014-2015 school year (\$3.7 million) reflected an increase in student enrollment of 18 students. Five, ten, and 20-year capital improvement budgets for MSMHS must consider state budget projections for magnet-school funding, and include projections for facility and equipment replacement plans such as climate control system repairs and replacement as well as long-term facility improvement projects such as additional classroom and community spaces.

The annual building budget is developed through a collaboration of the MSMHS Principal and LEARN Administration and approved by the LEARN Executive Director. Student learning is supported by a variety of programs and services within the school and in community partnership opportunities. These programs include a library media center, a four-year advisory program, and a wide variety of student-proposed and teacher-mentored clubs. In addition, there is a fencing team of which 20% of the student body participated during the 2014-2015 school year. MSMHS also maintains a membership with Project Oceanology and New England Science and Sailing (NESS). These memberships provide access to on-the-water programs and student summer camp opportunities to support the science course curricula. There is also a cooperative agreement with the Mystic Marineline Aquarium to provide class visits and programs. A LEARN program for students with autism is hosted within the building, adding to the school's diversity and providing a variety of opportunities for the school community to interact. Endicott Survey results indicate that 100% of the staff, 94% of the students, and 73% of parents agree that

the community and the district's governing body provide dependable funding for a wide range of programs and services.

There are 271 students enrolled in the 2015-2016 school year. Faculty consisted of 21 content area faculty, three special education teachers, and one literacy support teacher; a ratio of 11 students to 1 certified teacher. According to the Endicott Survey, 100% of faculty, 82% of parents, and 94% students agree that dependable funding is provided for professional and support staff. In addition to the certified teaching staff, MSMHS houses a school-based health center (SBHC) for enrolled students that provides physical health, behavioral health, and dental services during the school day; a full-time school psychologist; two school counselors; and two full-time instructional assistants.

Endicott Survey results indicate that 100% of staff agree that dependable and adequate funding is provided for instructional and technology support, materials, supplies, and equipment. Certified faculty participate in school- and district-sponsored professional development that support school initiatives to improve student learning. The 2014-2015 school year included cross-curricular literacy strategies and diversity training. In both 2014 and 2015, a four-day summer LEARN Curriculum Academy was attended by teachers from the Science, Social Studies, Language Arts, Math, Special Education Departments, and administration. Additionally, LEARN offers tuition reimbursement based on a maximum of 50% of tuition to a maximum of 30% of the UConn graduate tuition rate for a course with the same number of credits.

Student and faculty laptops, provided by the school and used in school and at home, are maintained by the district's IT department, as are the servers used to store all professional and student work. In the fall of 2014, additional WiFi access points were installed to support over 1,000 wireless devices in the school. Teachers submit instructional materials, supplies, and

equipment requests annually; this information is used to develop the budget. Consumable instructional supplies purchased during the school year are approved and ordered, and when necessary, reimbursements for out-of-pocket costs are provided.

MSMHS consistently develops, plans and funds programs to ensure the maintenance and repair of the building and school plant, to properly maintain, catalogue, and replace equipment, to keep the school clean on a daily basis. The office staff tracks and catalogues work orders through an online program run by Service Solutions. Service Solutions is a contracted company that provides maintenance, installation, and repair of the school and grounds. The office staff and administration creates work orders, through Service Solutions, for any repairs that need to be completed. All staff receive OSHA-approved safety training, such as blood-borne pathogens, on an annual basis. Endicott Survey results show 92.5% of parents believe MSMHS develops and implements a plan to maintain and repair its facilities, plant and equipment.

MSMHS has one daytime and two nighttime custodians who are employed full-time and maintain an exceptional level of cleanliness at MSMHS. The custodial staff is responsible for cleaning the building, removing trash, and performing other day-to-day duties. The daytime custodian carries a walkie-talkie that facilitates his immediate response to requests. Service Solutions is responsible for the scheduling of the custodial staff. Endicott Survey results report 100% of students, parents, and staff believe MSMHS is clean and well maintained.

The Principal has developed a long-range plan that addresses programs and services, enrollment changes, staffing needs, facility needs, technology, and capital improvements. For large expenditure items, the Principal enters budget requests to the Executive Director. Equipment such as the elevator, furnace, geothermal heating system and large food-service machinery are maintained on an annual basis and inspected as required by local and state

agencies. Endicott Survey results show 96.8% of staff believe needed repairs are completed in a timely manner. The aquaculture lab is maintained annually by school aquaculture staff in conjunction with Service Solutions.

The school plans for long-term capital improvements; for example, in 2014 a \$175,000 upgrade was made to the Wi-Fi system to accommodate not only students' school laptops, but to also support 21st century teaching and learning throughout the building. MSMHS enrollment grew over the last four years to 271 students from the original 100 freshmen and sophomore students in the 2011-2012 school year. The Principal reviews enrollment numbers every year to ensure proper staffing needs and adequate programs and course offerings. This information is shared with the school community. The special education population is also closely monitored each year to ensure adequate staffing.

The community funds and the school develops and implements a long-range plan that addresses programs and services, enrollment changes, staffing needs, facility needs, technology, and capital improvements. The Endicott Survey shows that 100% of the staff agree that the school has a long-range plan to address facilities, future programs, services, staffing levels, and capital improvements. The school's long-range plan is flexible enough to include any new programs in the future. Funded programs such as Project Oceanology, NESS, Mystic Aquarium, Mystic Seaport, and others, are reviewed periodically to ensure they are aligned with the curriculum and support student learning. Any new programs, driven by student interest, will be reviewed for future funding. For example, the Latin program was added in the 2013-2014 school year based on the student interest survey. In that year, 98 students were enrolled. Enrollment decreased to 44 students in the 2014-2015 year. As a result of an anticipated enrollment of 17

students for the 2015-2016 school year, the program was discontinued; however, online learning opportunities were provided for any students interested in continuing their Latin studies.

The transition process from middle school to high school begins during the spring of a student's 8th grade year. The Special Education Department works with sending districts to hold PPT meetings and ensure all incoming students' needs are addressed. For the 2015-2016 school year, a certified Language Arts teacher was hired to improve reading and writing skills for students identified by the SRBI Team. In addition, two specialists were hired to support student learning in any subject area. The school has funding available for any students with financial difficulties taking AP/ ECE courses to ensure equitable access for all.

The school's long-range plan accounts for any anticipated enrollment changes and staffing needs. The Connecticut State Department of Education sets a maximum number of seats for each magnet school in the state. MSMHS conducts an annual blind lottery that accepts incoming 9th grade students, based upon the anticipated open seats for the upcoming school year. Moreover, MSMHS has a sibling policy that guarantees siblings of current students' admission to the school. Through the LEARN and MSMHS partnership with the Superintendent's Military Liaison Committee, MSMHS also has highly mobile slots available for military families. The administration provides excellent recruitment to ensure 8th graders are aware of the school, which has consistently received over 400 applications since the first year of recruitment in 2011. During the 2014-2015 school year, MSMHS allocated \$55,000 initially to start a library media center and a subsequent budget of \$12,000 is allotted per year for library improvements and/or acquisitions. Currently, the Literacy Support Teacher operates and maintains the space. In addition, two SRBI instructional assistant were hired. One to monitor study halls and to provide extra support for students and another to work individually with

students on skill building. Each of these steps is evidence of the MSMHS' support of school-wide literacy and providing the resources necessary to address the students' needs.

The school's long-range plan takes into consideration technology requirements and improvements. The technology budget includes a laptop for each incoming freshman and a new laptop for each teacher every four years including a four-year warranty and regular software updates. According to the Endicott Survey, 99.6 % of students agreed that the school has a sufficient number of computers for their use, and 100% of students agreed that computers were available to them before, during, and after school hours.

Additionally, graphing calculators, e-readers, and iPads have been purchased for student use during classes and study hall. MSMHS focuses on the use of technology in the classroom; because of this focus, the Wi-Fi system in the school was upgraded in 2014 to ensure reliable wireless internet in all areas of the school. The school has subscriptions to online databases such as ScienceDirect and EBSCOhost, which allow students and teachers to access resources and effectively conduct research. Additionally, teachers may request and receive any software that enhances the learning experience. When technical issues arise with laptops or networks, the school utilizes the LEARN IT Department and this cost is included in the budget. For the 2015-2016 school year, MSMHS purchased additional bridge simulators that will allow for an improved hands-on experience for students in the marine studies courses.

The long-range plan addresses the anticipated capital improvement and facility needs for the next twenty years. The school's budget includes funding for facility needs and maintenance. A maintenance schedule for furniture, the aquaculture lab, and any large lab equipment that will need to be replaced is also included in the budget. From its inception, MSMHS staff recognized the need for busses to transport students off-site to access additional

learning experiences outside the classroom and enhance instruction. In 2014, MSMHS purchased a bus and trained staff for certification to operate the vehicle. Additionally, MSMHS has improved the HVAC system, purchased new equipment for the kitchen, and repaired the pavement in the parking lot.

MSMHS faculty and building administrators are actively involved in the entire process of developing and implementing of the budget. The budget process begins in January with the administration's distributing budget request forms. Teachers meet with their respective departments and compile a budget for necessary supplies such as textbooks, equipment, software, and consumables. These budget forms are then sent to administration for review. Once approved, the equipment is ordered in time for the upcoming school year. To date, science equipment and supplies have always been approved. If necessary and budget considerations merit further consideration of a request, the administration meets with the teacher individually to assess the importance of the requested item and discuss alternatives. Due to the nature of being a magnet school, the complete school budget including teacher salaries and benefits, capital improvements, technology, and instructional materials, is developed by the MSMHS Principal. The school's budget is directly impacted by state funding and student enrollment. The Principal develops a budget to ensure all current needs are met and money is allocated as reserves for future needs.

The school site and plant support the delivery of high quality programs and services. MSMHS has two school counselors and a school psychologist who have their own offices that provides the necessary space and privacy to speak with students, parents, and teachers. In addition, there is a private conference room that is available for larger meetings with the school community.

The school site includes a private office for the full-time nurse, and additional separate areas for the SBHC. The SBHC has one full-time APRN, one full-time nurse's assistant, and a full-time behavioral health specialist. The school is able to provide space for a dental hygienist from SBHC twice a year. SLA Management provides daily breakfast and lunch using the school's kitchen facilities and equipment, which includes two baking ovens, three refrigerators, two freezers, a cold food storage case, a beverage storage case, and a food serving station. The 271 students are scheduled during three lunch periods to accommodate the smaller cafeteria size.

With the size of the building and the number of classrooms, the school is able to provide small class sizes, facilitating more student-teacher interaction and personalized instruction. The average class size for the 2014-2015 school year was 14 students. There are four science classroom/labs outfitted with lab-grade tables, microscopes (digital and wireless), drying ovens, analytical balances (to measure mass to the thousandth of a gram), two countertop incubators and one portable incubator (for temperature control), autoclave (to sterilize equipment), and Vernier probes (for real-time data collection). There is a fully equipped aquaculture lab supports authentic instruction, to which \$15,000 is allocated yearly for maintenance and updates. The school has a dedicated room for five bridge simulator that gives students the experience of and training for driving a boat. The school has expanded the simulator stations to allow for increased student engagement.

All students are provided with their own laptop computer for the duration of the school year. In addition, the library media center provides a computer lab with 15 desktop computers and five scanners for student and teacher use. The library media center's open concept and central location allow for student and teacher use from when the students arrive at 6:00 AM until

the 7:00 PM The size of the space also allows for a daily study hall, roundtable discussions, group projects, class meetings, and club activities.

The flexible design of the school building allows for many multipurpose spaces, such as the Great Hall, which functions as a study hall, auditorium, cafeteria, and gymnasium. According to the Endicott Survey, 98.3% of students, 97.5% of parents and 100% of teachers agree that the school facility is well maintained and supports the delivery of high-quality programs and services, which are conducive to education.

The school maintains documentation that the physical plant and facilities meet all applicable federal and state laws and are in full compliance with local fire, health, and safety regulations. The school plant and facilities are inspected once a year by the City of Groton Fire Chief to ensure compliance with all federal, state, and local regulations. The school works closely with the Chief of Groton Police, designated School Resource Officer and the City of Groton Police Department to ensure safety of the entire MSMHS community. Detailed instructions for emergencies are posted in all areas of the school and practice drills are conducted monthly by school staff. The MSMHS Principal is the LEARN District Emergency Safety Director for the school district. Six MSMHS staff members are FEMA trained and certified in the Incident Command System. There is a state-mandated Work Site Safety Committee, comprised of the administration, the school nurse, two classroom teachers, chemical hygiene officer, and the office manager. The committee meets four times a year to review any accidents that occur involving faculty and students. Each year, the committee inspects every classroom for potential safety hazards. Committee members guarantee that every classroom has a fully equipped first aid kit and posted emergency routes. The committee is mandated to keep minutes and an agenda which are sent to the district human resource department, which oversees the

committee to ensure adherence to the laws and regulations. Any needed repairs or maintenance are completed by Service Solutions.

An accredited inspector, as required by the Asbestos Hazard Emergency Response Act (AHERA), has inspected the building for asbestos. The building is inspected every six months by qualified personnel. Every three years, the school is examined by an accredited and licensed inspector. LEARN provides notice of all pesticide applications to the entire MSMHS community at least 24 hours in advance. Pesticide application records are maintained for a minimum of five years after each application.

The school site is outfitted with Braille signs, elevators, automatic exterior doors, areas of refuge, and handicapped-accessible bathrooms that meet all ADA regulations. The science classroom/ labs and aquaculture lab are in full compliance with federal and state laws. The school Chemical Hygiene Officer (CHO) ensures compliance with all OSHA safety regulations and maintains all chemicals with a safety data sheet, as well as completes an inventory of supplies twice a year. The CHO attends training and is responsible for providing lab safety training for all the teachers, staff, and paraprofessionals who work in the classroom/ labs. There are four shower/ eyewash stations. All the classroom/ labs and the aquaculture lab meet ADA regulations to allow for all students to participate in classroom activities. The aquaculture lab is outfitted with a ramp permitting students with physical handicaps access to the fish tanks. All classroom/ labs have handicapped-accessible science tables and sinks.

All professional staff are fully committed to actively engaging parents and families as partners in each student's education and reach out specifically to those families who have been less connected with the school. According to the Endicott Survey, 100% of staff feel that they actively engage families as partners in each student's education. To this end, 92.7% of parents

agree with the staff and feel that the school effectively communicates with home. The school communicates information to families through the school website, MSMHS Principal's Twitter account, phone calls and emails home through School Messenger, and a weekly newsletter via email updating families on current events and announcements. A hard copy of the newsletter is sent to families who do not have internet access. Pearson's PowerSchool is the primary tool for teachers to communicate grades with all MSMHS families. This database reflects uniform, school-wide grading practices and is updated weekly by all staff.

The PTO provides the Principal with a discretionary fund to assist students unable to afford necessary supplies or materials. For example, monies from the PTO discretionary fund have been used to install and maintain internet access at students' homes where there is no internet access. Calculators, backpacks, dance tickets, yearbooks, school gear, and other school supplies have also been purchased with that fund. The Principal makes it very clear to the student body that requests for financial assistance are confidential. The school pays for taxi services when parents need to attend a meeting at the school and cannot provide their own transportation. Counselors, psychologist, and administration will make home visits when requested, or when a student is truant. There are several bilingual faculty members who serve as interpreters for those families for whom English is not their primary language. Additionally, the school holds a food drive in late November to collect Thanksgiving items. On the Wednesday before Thanksgiving, the Principal, Dean of Students, and other members of the faculty deliver a full Thanksgiving dinner to all families who accept assistance.

The Advisory Program at MSMHS is a keystone component as it fosters strong relationships. Every student is assigned to the same advisor for all four years of high school. Teachers meet with their advisees for 80 minutes per week to discuss a variety of topics

which include academic, post-secondary, and socioemotional issues. The advisory curriculum is developed by the Advisory Project Leader and each grade level is often given a different lesson for its advisory. For example, seniors focus on college planning, juniors on SAT prep, sophomores on future goal planning, and freshmen on transitioning from middle school to high school. All advisors are required to make phone calls to each advisee's parents/guardians at least once per quarter. Most advisors go well beyond this communication if issues present themselves.

The school develops productive parent, community, business, and higher education partnerships that support student learning. The Endicott Survey shows that 100% of the staff believes that the school has effective partnerships with parents, community organizations, businesses, and higher education to support student learning. In addition, 96.7% of parents agree that those partnerships are effective. Parent involvement is an integral component of the MSMHS community. Parents have been a vital part of the NEASC process including evidence collection, meeting attendance, and the self-study narrative writing. The PTO meets monthly to develop fundraisers that support faculty, students, and school-related programs and initiatives. PTO provides MSMHS with fencing equipment, two \$500 scholarships, a professional artist for Art Club, guest speakers, as well as contributes to the Principal Discretionary Fund for students in need. Parents are involved in school improvement committees in which they are an integral part of discussing policies and procedures and hiring new staff.

The partnership with the University of Connecticut (UConn) is one that has been fostered and developed over several years. The Principal of MSMHS signed a Memorandum of Agreement with Dr. Mun Choi, Provost & Vice President for Academic Affairs, and Dr. Marty

Wood, Interim Director of UConn Avery Point, to offer unique UConn courses at MSMHS. At the start of the 2015-2016 school year, 141 students are enrolled in UConn ECE courses. Students frequently attend field trips to UConn in order to garner real-world experiences correlating directly to the curriculum. Project Oceanology, located on the UConn Avery Point Campus, offers on-the-water experience for MSMHS students and summer employment. Furthermore, the partnership with UConn goes beyond the classroom. MSMHS has a Memorandum of Agreement with UConn Avery Point to use their facilities for graduation each year.

MSMHS has a strong partnership with the City of Groton. Groton police officers have 24-hour access to the facility and walk through the building on a daily basis. MSMHS created the first known emergency response system that allows administration and staff to alert City of Groton Police Department via the radio control system. The School Resource Officer (SRO) is on site frequently and interacts with the student body. The SRO administers advisory lessons on internet safety, teen dating laws, and alcohol awareness. The Mayor of the City of Groton serves as a judge in the annual PTO Spelling Bee fundraiser. The Principal has participated in a State Emergency Management Drill with city officials and the Governor of Connecticut.

The partnership with the United States Coast Guard Academy (USCGA) has developed because of the relationship formed between the USCGA Rear Admiral/Superintendent and the Principal. The USCGA Rear Admiral/Superintendent meets periodically with the Principal, who has been invited to most of the major events at the USCGA as an honored guest. The Rear Admiral was the guest speaker at the first MSMHS graduation in 2014. Furthermore, the Science Department Head at the USCGA is the father of a student of the class of 2016, which has allowed for significant collaboration with the MSMHS Science Department. They met to

develop common assessments, create school-wide lab report guidelines, revise the MSMHS Rubric 4, the Scientific Research Rubric, and embed a Remotely Operated Vehicle (ROV) unit into the Marine Technology Curriculum. In addition, MSMHS students who are interested in attending the USCGA, have been selected to participate in the Academy Introduction Mission (AIM) Program.

The Mystic Aquarium and MSMHS have established a research facility at MSMHS to test the effectiveness of a marine ornamental fish grow-out system that was designed by Roger Williams University. A Mystic Aquarium intern maintains the collaborative facility within the school building on a daily basis and works with school staff and MSMHS student-interns. The goal of this collaboration is to identify marine ornamental species that can be grown in a laboratory setting to strengthen coral reef conservation efforts. Current and former students at MSMHS both volunteer and are employed by the Mystic Aquarium because of the knowledge they acquire at school. In addition, Mystic Aquarium has been instrumental in developing the new Aquarium Science course that began in the 2015-2016 school year. Two senior students will have the opportunity to gain three UConn credits with the Marine Mammal Seminar course offered at Mystic Aquarium.

MSMHS has developed partnerships with two postsecondary maritime institutions. The State University of New York (SUNY) Maritime College's Rear Admiral/President Dr. Michael Alfultis, former Director of UConn Avery Point, is developing a 3-credit course called Introduction to Navigation which will utilize the bridge simulator at MSMHS. Dr. Alfultis, along with MSMHS administration, are drafting a memorandum of agreement (MOA) that will allow automatic acceptance to SUNY Maritime College for a MSMHS graduate who meets the rigorous academic requirements. In addition, the Massachusetts Maritime Academy signed a

MOA which states that one MSMHS graduate with the following credentials will automatically be accepted should the students apply early action: 3.3 GPA, 1000 combined SAT Score and 21 ACT Score, successful completion of four years of mathematics.

The MSMHS teacher of the ECE World Maritime History course has developed a partnership with Mystic Seaport, the Museum of America and the Sea. This partnership includes two annual field trips with the entire sophomore class. The field trip itinerary was created by MSMHS teachers and Mystic Seaport staff. The Mystic Seaport has also sent guest speakers to conduct demonstrations at MSMHS. Additionally, the ECE World Maritime History teacher has attended professional development at Mystic Seaport specific to the instructional content. Students volunteer and work at the Mystic Seaport.

EXECUTIVE SUMMARY

The MSMHS community and LEARN provides consistent and adequate funding for a wide range of school programs and services, including sufficient professional and support staff; on-going professional development and curriculum revision; a full-range of technology support; sufficient equipment; and sufficient instructional materials and supplies. Funding is directly related to student enrollment and has been consistent since the school's opening.

The MSMHS faculty and staff work together to develop, plan, and fund programs to ensure the maintenance and repair of the building and school plant; properly maintain, catalogue, and replace equipment; and keep the school clean on a daily basis. Issues and repairs are dealt with in a timely fashion by Service Solutions staff to ensure the school maintains its welcoming, well-maintained, and inviting environment to further encourage collaboration among faculty and students and enhances learning.

The community funds and the school develops and implements a long-range plan that addresses programs and services, enrollment changes, staffing needs, facility needs, technology requirements and updates, and capital improvements. MSMHS has committed to maintaining current programs and has already put money aside for anticipated capital improvements for the next twenty years.

MSMHS faculty and building administrators are actively involved in the process of developing and implementing the budget. The process begins in the spring of the prior school year and includes all MSMHS staff.

The school maintains documentation that the physical plant and facilities meet all applicable federal and state laws and are in full compliance with local fire, health, and safety

regulations. The school site and plant are well designed to support the delivery of high quality programs and services.

All professional staff are fully committed to actively engaging parents and families as partners in each student's education and reach out specifically to those families who have been less connected with the school. Furthermore, MSMHS has fostered many parent, community, business, and higher education partnerships that are highly productive and support the learning of all students.

Based on the NEASC Committee on Public Secondary Schools (CPSS) Rating Guide for the Standard on Community Resources, MSMHS judges its adherence to the Standard as **EXEMPLARY**.

Strengths:

1. The funding for a wide range of school programs and services
2. The budget which accommodates small class sizes that maximize personalized instruction
3. The funding for school year professional development and summer curriculum academy
4. The provision and maintenance of a 1:1 technology ratio for students and staff
5. The funding for instructional materials and supplies
6. The staff in place to maintain the physical plant and site
7. The autonomy of the administration to address immediate funding needs as well as saving for long term maintenance
8. The involvement of the entire faculty in the budget process for instructional supplies
9. The onsite cafeteria and SBHC available to all enrolled students regardless of finances
10. The equitable access to all areas of the building for students
11. The advisory program which fosters strong relationships between students and faculty

12. The PTO's Principal's Discretionary Fund which allows for the purchase of school supplies for students in need
13. The many ways information is disseminated to MSMHS families
14. The partnership with local and state police
15. The partnerships with marine-related organizations
16. The partnerships with institutions of higher education
17. The communication of school information with all MSMHS families

Needs:

1. Investigate the potential to expand the school site and increase enrollment
2. Develop opportunities for student learning and faculty teaching at institutions of higher education and local businesses
3. Design and implement a writing lab to support schoolwide literacy goals and 21st century learning expectations