

ANNUAL REPORT 2010-2011



Advanced Math and Science Academy Charter School
201 Forest Street
Marlborough, Massachusetts 01752

Phone: 508-597-2400 Fax: 508-597-2499

www.amsacs.org

TABLE OF CONTENTS

School Description	1
Letter from the Chair of the Board of Trustees	2
Mission Statement	3
I Faithfulness to Charter	3
A. Accountability Plan Objectives and Measures Relating to Faithfulness to Charter	3
B. Common School Performance Criteria: Implementation of Mission, Vision, and Educational Philosophy	5
C. Common School Performance Criteria: Implementation of the Governance/Leadership Structure.....	6
II Academic Program Success	8
A. Accountability Plan Objectives and Measures Relating to Academic Program Success	8
B. Common School Performance Criteria Relating to Academic Program Success	13
Curriculum	13
Instruction	15
Classroom and School Environment.....	16
Diverse Learners	17
Professional Climate	17
Assessment and Instructional Decision-making.....	19
Program Evaluation	19
III Organizational Viability	20
A. Accountability Plan Objectives and Measures Relating to Organizational Viability	20
B. Common School Performance Relating to Organizational Viability	22
Policy Decisions	22
Amendments to the Charter	23
Complaints	23
Oversight	23
Board Planning	24
Family Engagement	24
Safety	24
Employee Qualifications.....	25
Financial Oversight	25
Recruitment, Enrollment, and Retention Strategies	26

Recruitment and Retention Plan	27
Dissemination.....	29
Financial Reports	
Fiscal Year 2010 Financial Statement	30
Fiscal Year 2010 Balance Sheet	31
Fiscal Year 2011 Approved School Budget	32
Capital Plan	33
Data Section	
Instructional Time	35
Student Enrollment Information	35
Student Demographic and Subgroup Information	35
Administrative Roster for the 2009-2010 School Year	36
Teachers and Staff Attrition for the 2009-2010 School Year	36
Administrative Organizational Chart 2009-2010	37
Members of the Board of Trustees 2010-2011	38

School Description

The Advanced Math and Science Academy Charter School is located in Marlborough, Massachusetts and was designed to meet the need for high quality math and science secondary education in the Marlborough, Hudson, Maynard, Clinton (MHMC) region. There is a national sense of urgency to improve education in science, technology, engineering and math (STEM). AMSA is already on the forefront of this movement, offering an alternative educational model based on international best practice.

AMSA's rigorous curriculum and reputation of excellence has drawn students from many surrounding communities outside the region of service, including Shrewsbury, Worcester, Westborough, Southborough, Northborough, Ashland, Hopkinton, Upton, Bolton, Framingham, Natick, West Boylston, and Grafton.

Chartered by the Commonwealth of Massachusetts in May 2004, the school opened its doors to 239 students in grades six and seven in September 2005 and ending the year with 275 enrolled. Each subsequent year the school enrolled a new class of sixth graders, expanding the grade span by one year.

The Commissioner of Elementary and Secondary Education approved the renewal of our charter, without condition, on January 29, 2010. The Board of Elementary and Secondary Education approved a charter amendment to increase our enrollment maximum from 828 to 966 students and to increase grades served from six through eleven to six through twelve, on February 25, 2010. In September 2010, AMSA enrolled 966 students in grades six through twelve. At the end of year six, AMSA achieved its first major benchmark, graduating the Pioneer Class of 2011.

The curriculum and school culture has brought great attention to AMSA. Drawing on the best international practices, AMSA's curriculum is based on the belief that all children are able to learn abstract concepts at an early age and build on these concepts as they develop. Each subsequent year of learning builds upon the foundation laid in the prior years. All AMSA's students in grades 6 through 8 take the same sequence of courses, where the subjects are taught over a multi-year period. The core of the educational model is highly structured, and each year consists of continuous, logically organized, and interconnected multi-year courses in mathematics, physics, chemistry, biology, computer science, world geography, world history, world literature, English, foreign language, arts, and physical education. This education model prepares our students for the rigors of AMSA's high school curriculum, which provides a wide variety of honors and Advanced Placement courses, and exciting electives to all our students.

An example of outside recognition of AMSA's innovation in both curriculum and pedagogy is the recent request by the College Board to help design the standards for a new national middle and high school computer science curriculum.

AMSA's school culture encourages the joining of students from diverse backgrounds in a mutual quest for learning and the celebration of knowledge. We are very proud of our achievements as an educational community, providing the opportunity for students and teachers to excel past expectation.

Letter from the Chair of the Board of Trustees

This year has featured the graduation of our first high school class. They are the Pioneer Class of 2011. Our entire community thrilled to the roll call of graduates and the colleges and universities that they will be attending.

Our graduates were overwhelmingly successful at securing admission to their first choice colleges and universities. Most will be attending top 50 institutions such as Cornell, WPI, and University of Chicago, with one student heading to West Point and one to Annapolis.

Each of our graduates demonstrated that we are delivering on our mission promise: *“to create a learning environment that celebrates knowledge and where children of all backgrounds and abilities will excel in all subjects, especially math, science, and technology”*.

AMSA students continue to participate in many academic and artistic competitions achieving high honors and recognition regionally and nationally. They continue to score higher on all MCAS tests when school averages are compared to our four core sending districts (Marlborough, Clinton, Hudson, and Maynard) and the state.

Our high school students continue to achieve outstanding results in the PSAT, SAT, and AP exams. Many students have found a place in the performing arts, entertaining our community with theater and music. Our athletic programs are expanding and our teams reflect the spirit and enthusiasm of AMSA.

Operationally, AMSA has achieved a high degree of stability. We are delighted with the quality of our staff at all levels. Our Executive Director, Barbara McGann, retired at the end of June. We are thankful that Barbara was able to help us for the past three years. After an extensive search and selection process, we have appointed Mr. John Brucato to serve as AMSA's Executive Director. AMSA is unique and our people have a deep commitment to our students. John is a veteran educator whose passion, knowledge, skill and leadership will help us to achieve new levels of excellence.



Henry Haugland,
Board of Trustees Chair

Mission Statement

The Advanced Math and Science Academy Charter School will create a learning environment that celebrates knowledge and where children of all backgrounds and abilities will excel in all subjects, especially math, science, and technology, enabling them to succeed in the workplace of a modern world.

I Faithfulness to Charter

A. Accountability Plan Objectives and Measures Relating to Faithfulness to Charter

AMSA's Accountability Plan for the second charter term is based on the new guidance provided by the Charter School Office. The new plan includes two objectives relating to faithfulness to charter. Each objective has specific measures by which to measure progress towards each goal, as detailed below.

Objective 1: The school is faithful to the mission, vision and educational philosophy defined in the charter application and any subsequent approved amendments.

Specific Measure:

AMSA will create a learning environment that allows all students to reach academic success.

- **95% of seniors will apply to a college or university and 100% of these students will be accepted to a college or university.**

2010-2011 Performance

98% (61) of seniors in the Pioneer Class of 2011 applied to a college or university and 100% of these students were accepted to at least one college or university.

The measure has been met.

Objective 2: The school establishes an academic program that includes the pedagogical approach, curriculum, assessment, and other unique elements defined in the charter application and any subsequently approved amendments.

Specific Measure:

The core of AMSA's educational model is highly structured, and each year consists of continuous, logically organized, and interconnected multi-year course in which teachers introduce, and build upon, fundamental concepts and theories in math, science, computer science, and the humanities, preparing students for the rigors of the high school curriculum and Advanced Placement courses.

- **80% of AMSA students in grades 11-12 will take at least one AP course.**

2010-2011 Performance

69% of students in grade 11 took at least one AP course and 71% of students in grade 12 took at least one AP course.

No. of AP courses	0	1	2	3	4	5
Grade 11	19	9	14	16	4	0
Grade 12	18	17	12	10	4	1

The measure has not been met. As AMSA becomes more familiar with the AP curriculum, and increases the AP course selection, we expect more students to participate in the AP curriculum.

- **90% of students who take an AP test will score a 3 or better.**

2010-2011 Performance

81% of students who took an AP test scored a 3 or better.

Score	5	4	3	2	1	Total
No. of Exams	83	64	54	29	20	250
Percentage	33%	26%	22%	11%	8%	100%

Exam Name	# of Exams	Average Score
English Language/Comp	15	4
English Literature/Comp	23	4
European History	43	2.4
US Government & Politics	15	4.1
US History	26	4
Calculus AB	12	4.7
Calculus BC	18	4.9
AB Sub score	18	4.9
Statistics	11	3.8
Biology	42	3.6
Chemistry	9	3.7
Physics B	3	4
Physics C: E/M	8	3.4
Physics C: Mechanics	9	3.9
French	5	3.2
Latin	6	3.2
Spanish	5	2.8

The measure has not been met. Student performance was very high in most subjects as demonstrated by the preceding chart. However, AP European History and AP Spanish fell below the goal of 3 or above, with AP European History being the obvious concern. Two factors played a role in the low performance demonstrated in AP European History. First, AP European History was taught as a two-year course, not the best-case scenario considering the length of time between the delivery of material and the AP test. Secondly, far too many students were permitted to take AP European History without the solid performance background necessary to support the rigorous curriculum. Changes in the delivery of the AP Spanish curriculum and the AP European History curriculum, including student eligibility, are currently under review.

B. Common School Performance Criteria: Implementation of Mission, Vision, and Educational Philosophy

AMSA's educational philosophy is premised on the belief that all children can succeed. When students – of whatever background and ability – are exposed to a structured curriculum consisting of continuous, logically organized, and interconnected multi-year courses they will prosper.

AMSA's curriculum is designed to match our educational philosophy. It offers students multi-year courses in a dozen different subjects, including Algebra, Geometry, Computer Science, Biology, Geography, History, English Language Arts, World Literature, Foreign Language, Art History, Physics, Chemistry, and Physical Education. Our curriculum also consists of a range of subject-specific courses that are united by common themes. For example, Science is taught in three separate subjects; Physics, Chemistry and Biology. English is split into English Language Arts and World Literature. The order and timing of topics in different subjects is mutually reinforcing. For example, grade 6 students study ancient Greek civilization in history class while they also study Homer's "Iliad" in their Literature course. Similarly, while 7th grade students study polynomials in math class they also develop a program to calculate the coefficients of Newton's binomial in their computer science classes.

Another unique feature of AMSA's curriculum is our Foreign Language program. All students in grades 6-8 take Latin. In grades 9-12, students have a choice of Spanish, French, and Latin. To address the charter's vision for a wider range of foreign languages, the school invested in the Rosetta Stone™ program as an option for AMSA students. Some students use the program to supplement their current language studies. Other students opt to enroll in the program as an extracurricular home-based activity, choosing among 15 different languages.

AMSA's educational approach ensures that all students have the opportunity to obtain basic and advanced knowledge in a wide range of subjects. Further, AMSA strives to provide students with the opportunity to receive as much remediation in the general education program as possible before referral for special education or a 504 plan. The basic concepts of our Student Assistance Process are: to assess the needs of the students, develop appropriate accommodations, and to access general education remediation options. Remedies may include new teaching and assessment strategies as well as alternative materials. All accommodations and assessment results are documented using a Student Assistance Report. This year we invested in an online math

remediation program for incoming students and the program is of such a high quality that we issued licenses to struggling middle school students nominated by their teachers.

The majority of our special education students spend most of their days in general education classrooms, although some students may be assigned to Instructional Support classes in English Language Arts (ELA) and/or Math, or a study skills class. AMSA's special education teachers also work closely with our general education teachers to develop effective teaching practices. On Tuesday afternoons from 3:30-4:30 every other week there are grade level team meetings. These meetings enable teachers to share best practices and review student Individual Education Plans (IEPs). Members of our Special Education Department regularly attend grade level meetings.

As AMSA's student demographics change and our enrollment increases, the number of students requiring special accommodations has increased. AMSA enrolled students with limited English proficiency (LEP) for the first time in 2009-2010. AMSA employs a licensed ESL teacher to oversee the LEP program. AMSA has recently hired a licensed Special Education Administrator to oversee our special education program. AMSA has hired additional special education support staff in response to the growing numbers of students being identified as needing additional services and to comply with the Elementary and Secondary Education Act.

C. Common School Performance Criteria: Implementation of the Governance/leadership Structure:

The AMSA Board of Trustees implements the governance and leadership according to the charter, the bylaws and Massachusetts General Law. The Board of Trustees governs the school. The Board is a public entity, which operates independently of a school committee. The members of the Board are public agents, considered special state employees of the Commonwealth of Massachusetts, M.G.L. c., 71, § 89. The Board holds the charter granted by the Commonwealth of Massachusetts. The activities of the Board are governed by the AMSA bylaws.

As stated in the AMSA bylaws, *"The Board shall supervise and control the Academy and oversee the affairs of the Academy and shall exercise all of the powers of the Academy, except as otherwise provided by laws, by the charter, or by the by-laws. The Board reserves to itself exclusively the power:*

- a. *to adopt, amend, or repeal the bylaws with the approval of DESE*
- b. *to amend the material terms of the charter, with the approval of DESE*
- c. *to determine general Academy policies, in compliance with state and federal law*
- d. *to manage the financial affairs of the Academy, including the approval of (i)an annual budget, (ii) the purchase , sell, or lease of real property; (iii) the pledge, assignment or creation of liens on or security interests in the real or personal property of the Academy, and (iv) the establishment, execution or modification of investment policies*
- e. *to determine issues regarding the governance of the Academy*
- f. *to determine the educational goals of the Academy*
- g. *to approve a curriculum*
- h. *to appoint or remove the Academy Executive Director, and the Executive Director of Development"*

The Board meets according to the new Open Meeting Law instituted by the Office of the Attorney General on July 1, 2010. The Board generally meets once a month, a midyear long-range planning meeting and an Annual Meeting at the end of the school year.

The Board is currently requesting an amendment to the enrollment maximum to provide more seats to our region of service and to assist the school with stabilizing the enrollment pattern caused by attrition in grade 8 in 2008 and 2009.

The Board meets with the Executive Director to discuss general school policies, such as the school handbook and the Bullying Prevention and Intervention Plan, approved in December of 2010.

The Board of Trustees Finance Committee meets regularly with the Executive Director and Business Manager to discuss the school finances and prepare the annual budget. Each year in operation, auditors have reported that AMSA has consistently demonstrated sound fiscal practices. The Facilities Committee meets with the Executive Director, key school administrators, the property owner, to oversee the lease of our facility and expansion progress occurring in the third building on the school campus.

The Board of Trustees Governance Committee is responsible for requesting approval of new board members and ensuring that the board is in compliance with Federal and Massachusetts General Law governing a public entity. The Governance Committee is currently requesting DESE approval of three new members and a minor amendment to the bylaws, adding clarification to areas regarding the election and term limits of board members.

The Board of Trustees Education Committee meets regularly with school leaders to determine general educational goals regarding MCAS, PSAT, SAT, and AP testing as well as internal assessment goals.

The Board of Trustees Education Committee meets regularly with school leaders to ensure that the education program includes the pedagogical approach, curriculum, assessment, and other unique elements defined in the charter, with a focus on the science and computer science curriculum this year.

Executive Director, Barbara McGann, officially retired from her position on June 30, 2011 after three years of service. At open meeting held on July 13, 2011, the Board of Trustees voted to offer the Executive Director position to John Brucato of Milford, Massachusetts after a thorough search and selection process, which began in April 2011. The Board included the input from administration, faculty and staff in their decision process. John Brucato brings with him 32 years of experience in education and a reputation for strong leadership.

II Academic Program Success

A. Accountability Plan Objectives and Measures Relating to Academic Program Success

AMSA's accountability plan has six objectives relating to academic program success.

Objective 1: Students at AMSA demonstrate proficiency, or progress toward meeting proficiency targets on state standards, as measured by the Massachusetts Comprehensive Assessment System (MCAS) exam in all subject areas and at all grade levels tested for accountability purposes.

Specific Measure:

- 90% of AMSA students enrolled for at least one full year will score in the Proficient or Advanced classification in ELA and at all grade levels tested for accountability purposes.
- 85% of AMSA students enrolled for at least one full year will score in the Proficient or Advanced classification in Mathematics and at all grade levels tested for accountability purposes.
- 85% of students enrolled for at least one full year will score in the Proficient or Advanced classification in Science and Technology and at all grade levels tested for accountability purposes.

2009-2010 Performance (2010-2011 data not available for complete analysis)

Spring MCAS 2010: Percentage of students who scored Advanced or Proficient

Grade and Subject	AMSA	Clinton	Hudson	Marlboro	Maynard	State
Grade 06-ELA	92%	62%	72%	69%	65%	69%
Grade 06-Math	89%	49%	59%	47%	48%	59%
Grade 07-ELA	93%	62%	81%	69%	70%	72%
Grade 07-Math	83%	37%	53%	45%	48%	53%
Grade 08-ELA	98%	75%	82%	68%	82%	78%
Grade 08-Math	75%	40%	63%	52%	47%	51%
Grade 08- Science & Tech	77%	31%	35%	29%	39%	40%
Grade 10-ELA	98%	68%	86%	80%	79%	78%
Grade 10-Math	95%	72%	80%	73%	67%	75%
Grade 10-Science & Tech	70%	58%	62%	58%	62%	65%

English Language Arts (ELA)

The percentage of students who scored in the Advanced or Proficient categories in English Language Arts exceeded the measure of 90% in all grades tested.

The measure has been met in ELA.

Mathematics

The percentage of students who scored in the Advanced or Proficient categories in Mathematics exceeded the measure of 85% in grades 6 and 10. The percentage of students who scored in the Advanced or Proficient categories did not meet or exceed 85% in grades 7 and 8.

This measure has been in Mathematics in grade 10, but not in grades 7 and 8.

Science and Technology

The percentage of students who scored in the Advanced or Proficient categories in Science and Technology did not meet or exceed 85% in grades tested.

This measure has not been met in Science and Technology.

Students in grade 10 who do not meet Proficiency in ELA and Mathematics have Educational Proficiency Plans. The Administration and Leadership Team actively developed new tutoring strategies this past year to satisfy the needs of our students who required additional instruction in ELA, math and science.

The AMSA education program includes Study Island™ (MCAS Prep Program) for students in grades 6 through 10 in math, science, and English language arts. The program is offered to students in grades 11 and 12 if additional tutoring is required. AMSA has implemented a peer-to-peer coaching program, which encourages teachers to share best teaching practices and improve content knowledge through evaluation, mentorship, and teacher led professional development programs. We expect the 2011 MCAS scores to reflect the impact of the attention given to our underachieving students. Examples of AMSA’s successful targeted tutoring initiatives this year include:

A senior who did not pass the 2009 Biology MCAS (10th grade) received targeted tutoring in Biology as part of their EPP. This student achieved a higher score on each subsequent retake, achieving a significantly higher score on the 2011 February Biology MCAS, meeting the MCAS requirement for graduation.

Student 1	Subject	June 2009	June 2010	Feb 2011
MCAS Score	Biology	214	218	238

A junior, who did not pass the 2010 Math MCAS (10th grade) received targeted tutoring in Math as part of their EPP. This student achieved a higher score on each subsequent retest, achieving a significantly higher score on the 2011 March Math Retest, meeting the MCAS requirement for graduation.

Student 2	Subject	May 2010	Nov 2010 Retest	Mar 2011 Retest
MCAS Score	Math	214	218	234

Specific Measure:

- 100% of seniors with Education Proficiency Plans (EPP) based on a less than proficient score on their 10th grade ELA and/or Mathematics MCAS will achieve Proficiency/Competency Determination (CD) and graduate with their class.

2010-2011 Performance

One of AMSA's goals is to provide high school students, who are required to satisfy the requirements of an EPP (Educational Proficiency Plan due to less than proficient MCAS scores in grade 10) with the support and guidance necessary to graduate with their cohorts.

Two students in our first graduating class of 2011 required the assistance of an EPP. Through the combined efforts of their dedicated teachers and their own determination to succeed, both seniors graduated with their class on June 12, 2011 and will be attending college in the fall.

The measure has been met.

Objective 2: The school achieves and maintains a median student growth percentile (SGP) of 40 or higher in the aggregate and for all statistically significant sub-groups in all subject areas tested for accountability purposes.

Specific measure:

- Students who score below the Proficient or Advanced classification and students in statistically significant sub-groups who score below the Proficient or Advanced classification will achieve and maintain a median student growth percentile (SGP) of 40 or higher.

2009-2010 Performance (2010-2011 data not available for complete analysis)

Student Growth Percentile by grade

SGP by GRADE	ELA	MATH
6	47.0	50.0
7	47.5	52.0
8	52.0	51.0
10	50.5	69.5

The measure has been met.

Student Growth Percentile by sub-group

SGP by SUB GROUP	ELA	MATH
Low Income	64.0	57.0
SPED	61.0	45.0

The measure has been met.

Objective 3: The school makes Adequate Yearly Progress (AYP) in the aggregate and for all statistically significant sub-groups in English language arts and mathematics.

Specific measure:

- Each year, the school makes AYP in the aggregate and for all statistically significant sub-groups in English language arts and mathematics.

2009-2010 Performance (2010-2011 data not available for complete analysis)

According to the Massachusetts School and District Profiles, AMSA students have consistently met the Adequate Yearly Progress (AYP) in the aggregate in both Math and English Language Arts. However, 2010 was the first year AMSA did not meet the AYP in all subgroups. The subgroup that did not meet AYP in 2010 was *Low Income* in Math.

The measure has been met in the aggregate, but not in the Low Income sub-group in mathematics. All students who do not achieve proficient or higher in the MCAS ELA, mathematics, or science have the opportunity to receive targeted tutoring. AMSA instituted a Title I funded afterschool tutoring program open to all students who did not score proficient or higher on MCAS tests. The Soaring Eagles, a program for students in grades six and seven, provides extra instruction to students in ELA.

In addition, subject teachers provide at least 45 minutes of extra help each week as part of their schedule. For two years, AMSA has provided all students in grades 6 through 10 with access to the MCAS preparation program Study Island™. The program is available to students in grades 11 and 12 if needed.

Specific measure:

- Each year, the school does not have a status for accountability purposes of Improvement, Corrective Action, or Restructuring.

2009-2010 Performance (2010-2011 data not available for complete analysis)

AMSA has not been identified for accountability purposes of Improvement, Corrective Action, or Restructuring.

The measure has been met.

Objective 4: If externally developed assessments other than the MCAS are administered, student performance is strong and demonstrates improvement over time on those assessments.

Specific measure:

- 95% of all students in grades 9, 10, and 11 take the PSAT. Students improve their Critical Reading and Writing PSAT scores by an average of 6% from grade 9 to 11. Students improve their Math PSAT scores by an average of 10% from grade 9 to grade 11.

2010-2011 Performance

98% of all students in grades 9, 10, and 11 took the PSAT in October of 2010. Students

in the class of 2012 improved their Critical Reading scores by an average of 15% and their Writing scores by an average of 14% from grade 9 to 11. Students in the class of 2012 improved their Math PSAT scores by an average of 14% from grade 9 to grade 11.

PSAT	Grade 9 (2008)	Grade 11 (2010)	% Improvement
Critical Reading	51.2	58.8	15%
Math	54.4	61.6	14%
Writing	48.6	55.2	14%

The measure has been met.

Specific measure:

- 95% of all upper school students will take the SAT before January first of their senior year. The class mean SAT score will be no less than 10% higher than the state mean in Critical Reading, Math, and Writing.

2010-2011 Performance

97% of AMSA's senior class took the SAT before January 1, 2011. The class mean SAT score was 18% (89 points) higher than the state mean in Critical Reading. The class mean was 22%(116 points) higher than the state mean in Math. The AMSA senior class mean was 19%(95 points) higher than the state mean in Writing.

SAT	Class of 2011 Mean	MA State Mean	% of differential
Critical Reading	590	501	18%
Math	632	516	22%
Writing	587	492	19%

The measure has been met.

Objective 5: The school's curriculum is documented, articulates the skills and concepts that all students must know and be able to do to meet state standards, is aligned horizontally and vertically, and supports opportunities for all students to master these skills and concepts.

Specific measure:

- AMSA's curriculum is aligned with the charter and the Massachusetts Curriculum Frameworks as documented in Atlas Rubicon and teacher's lesson plans.

2010-2011 Performance

The measure has been met.

Specific measure:

- 100% of the AMSA curriculum is available in Atlas Rubicon.

2010-2011 Performance

90% of AMSA's curriculum is available in Atlas Rubicon as of July 2011.

The measure has not been met. The projected time of completion is June 2012, at which time 100% of the curriculum will be available in Atlas Rubicon.

Specific Measure:

- To support opportunities for all students to master the curriculum, all teachers provide at least 45 minutes of extra help after school during the school week. Teachers identify struggling students based on MCAS scores and internal assessment. Tutoring in the area of need is offered to all identified students. 100% of students who receive targeted tutoring will significantly improve their academic performance in the subject(s) needing improvement.

2010-2011 Performance

The tutoring programs began in the spring of 2011. We do not have enough data to measure performance. However, the high school students who needed to fulfill MCAS competency determination requirements did improve significantly after receiving targeted tutoring in the areas of need as demonstrated in the charts on page 9.

The measure has been met for the class of 2011.

B. Common School Performance Criteria Relating to Academic Program Success

Curriculum

Drawing on the best international practices, AMSA's curriculum is based on the belief that all children are able to learn abstract concepts at an early age and build on these concepts as they develop. Each subsequent year of learning builds upon the foundation laid in the prior years. All AMSA's students in grades 6 through 8 take the same sequence of courses, where the subjects are taught over a multi-year period. The core of the educational model is highly structured, and each year consists of continuous, logically organized, and interconnected multi-year courses in mathematics, physics, chemistry, biology, computer science, world geography, world history, world literature, English, foreign language, arts, and physical education.

This cross-curricular approach involves all areas of study in humanities, math and science. In math, students study algebra and geometry in parallel during each year of school in grades 6-9, while advancing to higher-level mathematical concepts. In sciences, students take courses in biology, computer science, physics and chemistry in grades 7-8 and specialize in biology in grade 9, chemistry in grade 10 and physics in grade 11. Students also have the option to take Advanced Placement courses in each area of science in grades 10-12. All students are also required to take computer science for three of their four high school years at AMSA.

By aligning world art, literature and history, the humanities curriculum enables a deeper understanding of cultures and their interrelationships. The study of world history begins with the ancient world, and progresses to modern times over the multi-year course of study. In the same way, students concurrently study art and literature of the same period.

Sixth Grade Curriculum:

Eight subjects (Pre Algebra, Intro to Biology, ELA/World Literature, History, Intro to Latin, Computer Science, Art, and Physical Education)

Seventh Grade Curriculum:

Eleven subjects (Algebra I, Geometry, Biology I, Chemistry, Physics, ELA/World Literature, History, Latin, Computer Science, Art, and Physical Education)

Eighth Grade Curriculum:

Twelve subjects (Advanced Algebra, Geometry, Biology II, Earth Science, Chemistry, Physics, ELA/World Literature, History, Latin, Computer Science, Art, and Physical Education)

High School Curriculum

AMSA is striving to strike a balance between the ambitious academic goals stated in the charter and the realities of practical implementation. Over the past two school years, AMSA teachers, administrators, and Board of Trustees members have worked to accomplish two important goals related to the upper school curriculum: accommodating the requirements of the College Board, and adding seat time to foreign language. To accomplish these goals, AMSA's challenge was to adjust the upper school seat time in math and science to better align the curriculum with the Massachusetts Curriculum Frameworks and to guarantee that our students are in the strongest position for submitting college applications. The current curriculum remains faithful to the charter, covers all the content outlined in the charter and preserves the interconnections between subjects.

The goal of the AMSA High School mathematics program is to give students a deep and thorough understanding of mathematical concepts. AMSA provides classes on four levels of difficulty with corresponding tracks.

CP I

Teaches the program normally required for college admission, at a slower pace with a stress on practical applications with a focus on state level requirements for MCAS testing and the new SAT I reasoning test.

CP II

Thoroughly covers the mathematics required for college admissions with an option of learning a basic level of calculus in their fourth year.

Honors

For students who show a deeper understanding and aptitude for math. These courses cover concepts at a faster pace, allowing student to take AP calculus or higher-level electives in their senior year.

Advanced

For students who have an exceptional understanding of mathematical concepts and an interest in pursuing mathematics-related studies after high school. Courses at this level cover concepts at an accelerated pace and with more depth, leaving the last two years for Advanced Placement calculus and higher-level electives like multi-variable calculus and Advanced Placement statistics.

Grade	CP I	CP II	Honors	Advanced
9	Algebra I	Algebra II	Algebra II (Honors)	Algebra II & Trigonometry
10	Algebra II	Analytic Geometry & Trigonometry	Pre-Calculus	Pre-Calculus/ Beginning Calc
11	Analytic Geometry & Trigonometry	Pre-Calculus	Basic Calculus	AP Calculus AB or BC
12*	Pre-Calculus/ Beginning Calculus	Basic Calculus	AP Calculus AB or AP Statistics	AP Statistics and/or Multi-variable Calculus

* Financial and Consumer Math is offered to all seniors as a compliment to the math curriculum.

For a complete list of course offerings visit our website at <http://www.amsacs.org/pdf/AMSA-programs-ofstudy2010-11.pdf>

Instruction

All instruction is based on AMSA's curriculum. Feedback is provided by department chairs and fellow teachers. Teachers share ideas regarding pedagogy, content, and assessment during content team meetings. All teachers collaborate on the writing of benchmark assessments and share ideas and offer help regarding individual students' needs during grade level team meetings. Teachers share common teaching techniques such as the formal greeting, and the Do Now.

AMSA teachers utilize lesson plans that include an objective, a pre-assessment activity, teaching strategies and sequence of activities, including introduction, instruction, guided practice, independent practice, materials, groupings, processes, assessments and accommodations to be used, homework assignment, and a list of the Massachusetts curriculum standards to be covered. Department Chairs review lesson plans and provide feedback to teachers. The Director of Student Services also reviews lesson plans to ensure that accommodations for diverse learners are being implemented.

Teaching expectations are conveyed to teachers through professional development programs, the teacher mentor program, peer to peer coaching, the AMSA Faculty Handbook, and observation and evaluation feedback. Learning expectations are conveyed to students through the AMSA Student Handbook, advisory periods directed by the homeroom teachers, syllabi, individual student success plans, and teacher conferences.

Classroom and School Environment

Polices and structures are in place to foster an atmosphere of mutual respect and academic purpose. Class periods usually begin with a Do Now (a three to five minute starter activity posted on the whiteboard), followed by a lesson. Supervision is provided when students are out of the classroom to maintain order and safety.

The school day is carefully structured around four non-academic time periods: Student intake, lunch/recess, dismissal, and after-school/extended day. This time serves as AMSA's core student discipline support system which fosters the high behavior standards that are required of AMSA students and promotes a school culture that celebrates knowledge.

Students arrive between 7:30 AM and 8:00 AM and report to the cafeteria. The Dean of Students, administrators, teachers and other staff oversee intake until it is time for students to report to their homerooms no later than 8:05 AM. Homeroom teachers and hall monitors are present to supervise students passing in the hallways and using their lockers. Homeroom teachers are expected to set the academic tone for the day, assisting students to prepare for classes.

Students have lunch during an extended period 5, which is divided into 3 sessions to accommodate all students. Lunch is supervised by teachers and administration on a rotating schedule. Students are expected to be mindful of others, keep noise to a reasonable level and leave the cafeteria clean when their lunch session is over.

Students in grades 6, 7, and 8, report to their homerooms for the last period of the day for Directed Study. Students use this time to do homework, organize notebooks, or sign out to receive extra help from subject teachers. Teachers can use this time to make announcements and reinforce school policies. Teachers also help students prepare for dismissal. Upper School students in grades 9, 10, 11, and 12 are dismissed from their 8th period subject class. Students are dismissed in staggered groups; car pools, buses, and regular pick-up. Supervision is provided by administration, teachers, and staff. The After-school/Extended Day Program is closely supervised by the Dean of Students, the Extended Day Supervisor, and other designated teachers and staff. Students are expected to conduct themselves after school with the same standard of conduct that is expected during the regular school day.

AMSA developed a student mentor program to help students learn by teaching and mentoring other students. The intent of the program was to give existing eighth grade students the opportunity to make a positive impression on incoming sixth graders. Students have enthusiastically embraced the mentor program that has added a great deal to the school climate. The program has blossomed into the Student Leadership Program. AMSA students can also participate in such programs as: Big Brothers/Big Sister, Student Council, Peer Tutoring, SADD (students against destructive decisions) STAND (students stand up against genocide), the Leaders of Tomorrow, National Young Leaders Program, Student Mentors, and student directed community service projects.

AMSA's Second Annual National Honor Society Induction Ceremony welcomed seven new members on March 29, 2011. AMSA students demonstrate the dedication and educational rigor that results from of a school culture that celebrates knowledge and personal growth.

The effort made by administrators, staff, and particularly our students to encourage student leadership has resulted in far less disciplinary action needed in the classroom and in the general school setting. Students are developing the important social and community skills that will serve them well as they prepare for their future.

Diverse Learners

The percentage of students with special needs at AMSA is 8%. There are 34 students with 504 plans and 44 students with an IEP (Individual Education Plan). These students are able to excel beyond their previous expectations in most cases, engaging in the rigorous program through the use of differentiated instruction.

Differentiation is a teaching concept in which the classroom teacher plans for the diverse needs of students. The teacher must consider such differences as the learning styles, skill levels, learning difficulties, language proficiency, background experience and knowledge, interest, motivation, ability to attend, social and emotional development, and physical needs of all students. Students are given the opportunity to demonstrate understanding through alternate assessments, such as oral or dramatic presentations. Some students have the opportunity to work independently on projects at their own pace.

Observations and teacher recommendations lead to evaluations and intervention by the Special Education Department if necessary. AMSA is making greater efforts to differentiate the delivery of our curriculum to make it accessible to all students.

Students receive assistance for LEP (Limited English Proficiency), ELL (English Language Learner), Special Needs, and to students whose achievement is above or below grade level. Small group and individual instruction are provided to these students to accommodate their individual needs. AMSA has significantly increased the number of qualified special education and LEP/ELL teachers to assist students. AMSA recently hired a licensed Special Education Administrator to lead our Special Education Department. Our ELL Administrator is a licensed ESL teacher and organized *Sheltered English Immersion Training* for a selected group of 20 faculty members: Category 1 in December 2009, Category 2 in June 2010, and Category 3 training in August 2010.

Professional Climate

Administrators regularly evaluate teachers based on content knowledge, alignment with curriculum, and pedagogy. Key administrators conduct evaluations periodically to assess instructional practices and to offer feedback and guidance. Teacher evaluation is based on seven principles of effective teaching: currency in the curriculum, effective planning and assessment of curriculum and instruction, effective management of classroom environment, effective instruction, promotion of high standards and expectations for student achievement, promotion of equity and appreciation of diversity, and fulfillment of professional responsibilities. Administrators use these principles to focus on key areas of importance that meet AMSA's standard of instructional practice. After an evaluation, teachers are given feedback, support, and guidance if needed.

The administration is keenly aware that encouraging and providing relevant professional development builds team skills and fosters an exciting climate of teaching and learning. AMSA provides numerous professional development and training opportunities to faculty and staff on and off campus. The programs for this year featured a week long orientation for new and returning staff in August 2010 and three professional development days

during the school year. In addition to the professional development provided on site, faculty and staff routinely attended professional development programs and training off campus throughout the school year. This year, the Computer Science Department was particularly active in the advancement of professional development. The following list tracks the exciting professional development that our computer science faculty engaged in over the past year that not only added to their deep understanding of technology, but brought significant attention to AMSA as a leader in STEM education.

June 2010, Exeter Conference, Math and Technology conference in Exeter, N.H
Cell Phone programming and using Technology in the Math Classroom.

July 2010, Engineering for 21st Century
1-week Engineering workshop in CT

July 2010, CSTA CS&IT Symposium at Google's Mountain View Campus, CA
Computer Science Teacher Association workshops held on latest methods of teaching Computer Science fundamentals in the classroom. Teachers learned trends and initiatives in CS education across the country and received attention from other schools and universities about AMSA's unique Computer Science curriculum.

August 5th 2010, Joined Tech Hub Youth Summit
Teachers received an invitation to work with a collaboration of companies and universities including Google, MIT, Microsoft, MTC, and CAITE to motivate more students to take CS courses at the high school level and beyond.

October 11th, 2010 CSTA Greater Boston Chapter Approved, October 31st first meeting
Two AMSA teachers filed for Chapter leadership to form the first Massachusetts Computer Science teacher's chapter. They have Co-President status and received approval from National CSTA. They held the first Computer Science Teacher's meeting at MTC and had an outstanding attendance with support from Google, UMASS Lowell professors, CAITE and MTC. These teachers organized professional development for approximately 40 Computer Science teachers in the Massachusetts area. Monthly meetings continue since inception and participation is increasing.

October, 2010, Carnegie Mellon Robotics, 6 Tuesday Evenings at AMSA
PCS teachers participated in the online Carnegie Mellon On-line Robotics course and received professional development from AMSA to attend. Use of the VEX platform and programming the VEX robots were key aspects of the training.

November, 2010, UMass Lowell Saturday Workshop for Educators
A Middle School and a High School teacher attended a one day workshop introducing the BotBall and Bot-Festival competitions. Applied for and received a scholarship robot worth 300.00 to use at the UMass Lowell Bot-Festival in April 2011.

January 2011, UMass Lowell Saturday Workshop
Teachers took two 7th grade students to learn about the Bot-Festival at UMASS Lowell in April 2011. (These teachers attended Festival with 11 students and 3 robots.)

January, 2011, Received Microsoft Academic Alliance Grant
Teacher worked with Microsoft contact and was awarded 3 year grant entailing complimentary MSDN Academic Alliance Developer subscription for AMSA.

In addition to these faculty programs, AMSA teachers are required to meet on a weekly basis to discuss, develop, and review curricula and pedagogy. The teachers meet with their department or with the interdisciplinary grade level team on a rotating schedule. Teachers share teaching strategies, exchange ideas, and track students needing additional support. These weekly team meetings alternate between grade level meetings and department meetings, with an occasional *all staff* meeting when needed. These structures and routines provide teachers a broad view of AMSA's unique, interconnected curriculum with attention given to student performance. Efforts to enhance the professional climate include: providing faculty and staff with a safe and comfortable working environment; a structure for offering or receiving feedback; time for classroom preparation built into their schedules; a teacher's lounge in each building; and offering opportunities for professional development off campus.

AMSA conducts an anonymous annual Staff Satisfaction Survey providing all staff with the opportunity to rate the school and administration, providing valuable feedback.

Assessment and Instructional Decision-making

Teachers use both formative, summative, and benchmark assessments to evaluate student performance and to adjust teaching techniques to accommodate student needs. Repeated use of the daily Do Now, quizzes and tests provide data.

Teachers make use of past midterm and final exams, as well as past MCAS, PSAT and SAT tests to evaluate student progress. An example of using data to improve instructional planning and practice would include the results of a sample PSAT test, taken from a previous year. Students as a group demonstrated low grammar scores alerting teachers to a need in this area. The teachers collaborated to include additional units focusing on grammar skills.

A student who is not performing at proficient or higher levels in MCAS or internal assessment receives additional instruction. High School students who do not meet proficiency standards on MCAS are provided with an EPP (Education Proficiency Plan) to help them reach competency determination for graduation.

Program Evaluation

AMSA regularly and systematically reviews the quality and effectiveness of the academic program through the following: MCAS, internal formative, summative, and benchmark assessments, weekly interdisciplinary grade level or content meetings, and teacher evaluations. The MCAS assessment tracks individual student progress as well as school wide progress. A student who is not performing at proficient or higher levels in MCAS receives additional instruction and the Special Education Coordinator, the Dean of Students, the adjustment counselor and/or guidance counselor, the student's homeroom teacher and their subject teachers, follows their academic progress closely. Internal assessment includes graded class work, homework, quizzes, tests, and final exams. Students at AMSA are expected to maintain a high standard of performance.

AMSA teachers are required to meet on a weekly basis to discuss, develop and review curricula and pedagogy. Meetings are devoted to developing content, sharing of instructional techniques and peer review. The teachers meet with their department or with the interdisciplinary grade level team on a rotating schedule.

III Organizational Viability

A. Accountability Plan Objectives and Measures Relating to Organizational Viability

AMSA's accountability plan has six objectives relating to organizational viability.

Objective 1: The school develops an annual budget that can be sustained by enrollment and is in support of student academic achievement.

Specific Measure:

- The school's annual budget is sustained by its enrollment.

2010-2011 Performance

AMSA has filled all available seats with a waiting list of over 400.

The measure has been met.

Objective 2: The school demonstrates a history of positive net assets, adequate cash flow to sustain operations and support the academic program, and consistently operates within budget.

Specific Measure:

- Each year, the school demonstrates a history of positive net assets, adequate cash flow to sustain operations and support the academic program, and consistently operates within budget.

2009-2010 Performance:

The Board of Trustees approved a balanced 2010-2011 budget at the Annual Meeting.

The measure has been met.

Objective 3: The school's annual independent audit is free of material or repeated findings.

Specific Measure:

- AMSA's annual independent audit is free of material or repeated findings.

2010-2011 Performance

The audit by accounting firm Alexander, Aronson, Finning and Company confirmed sound financial practices, demonstrating that AMSA responsibly manages public funds.

The measure has been met

Objective 4: The school involves parents/guardians as partners in the education of their children.

Specific Measure:

- AMSA provides parents/guardians access to EDLINE (Online Learning Community Management system). Parents/guardians can check homework assignments and monitor their student's grades and academic progress through EDLINE. Parents can communicate via email at any time with teachers and schedule conferences as needed throughout the school year.

The measure has been met.

Objective 5: Families and students are satisfied with the school's program.

Specific Measure:

- The school conducts a Family Satisfaction Survey every year. The Family Satisfaction Survey will have a response rate of 50% or higher.

2010-2011 Performance:

AMSA conducted a parent satisfaction survey in January 2010. The response rate to the survey was 84%.

The measure has been met.

Specific Measure:

- 90% of parents/guardians who respond to the Family Satisfaction Survey will be "very satisfied", "satisfied", or "somewhat satisfied" with the school's program.

The survey offered three questions relating to the school's program. The results of the survey demonstrated that 94% (overall average) of parents graded the school's performance characteristics as "very satisfied", "satisfied", or "somewhat satisfied".

The three questions relating to school's program:

Question 1: *Rate the academic program*- learning environment, quality of Math and Science instruction, quality of Humanities instruction, support provided to students by teachers, challenge, and academic achievement.

96% of responding parents answered "very satisfied", "satisfied", or "somewhat satisfied" with the academic program.

Question 2: *Rate the school characteristics*- recreational outlets, providing a welcoming environment to parents, discipline, safety, AMSA Bullying Prevention and Intervention Plan, extra-curricular activities, and leadership.

93% of responding parents answered “*very satisfied*”, “*satisfied*”, or “*somewhat satisfied*”. with the school’s characteristics.

Question 3: *Rate the communication*- the quality and timeliness of information provided by administration, administration’s responses, teacher’s responses, and communication with homeroom teacher.

92% of responding parents answered “*very satisfied*”, “*satisfied*”, or “*somewhat satisfied*” with the school’s communication provided by the administration and faculty.

The measure has been met.

Objective 6: Employees of the school meet all applicable state and federal qualifications and standards.

Specific Measure:

- 100% of AMSA teachers are Highly Qualified and meet all applicable state and federal qualifications and standards. Teaching qualifications are verified through the Department of Elementary and Secondary Education resources (ELAR).

This measure has been met.

B. Common School Performance Criteria relating to Organizational Viability

Policy Decisions

Policy development is one of the prime responsibilities of the Board of Trustees and the Executive Director. The Board will focus on the broad organizational policies, while development of the operating policies and procedures will be responsibilities of the Executive Director with concurrent Board approval. The policy making process will include the following steps:

- Recognize the need for the policy. Committees, the Chair or a member of the Board, the Executive Director, a staff member, parents, students, or community member can bring forward a need for a new policy. The party will bring the idea to the Board for discussion.
- Assign a task force. The full Board will consider the policy need and establish general considerations for the policy. The Board will assign a team to draft a new policy.
- Draft the policy. The task force will write a draft of the policy based on the Board’s input during the discussion.
- Consult legal counsel. Depending on the issue, it may be suitable for the task force to seek legal advice.
- Present to the Board for approval. After review and discussion the Board will vote.
- Review periodically. The Board will review all its policies periodically and revise as needed.

The Executive Director, with support of administrative staff, will develop the non-

governance policies related to the everyday school's operations with the Board's advice and guidance. The administration procedures are detailed in the *Personnel Policy Handbook*, which covers hiring, evaluation, and separation policies; salaries, payroll, workers compensation and benefits package; work day hours, vacations, holidays, sick and personal days; snow emergency procedures; health and safety issues; sexual harassment; conflict resolution and arbitration procedures; and all other policies.

Amendments to the Charter

The Board of Trustees has made two requests to amend the charter, one major and one minor, both submitted on July 25, 2011. The major amendment request seeks approval from the Commissioner and Board of Elementary and Secondary Education to increase the enrollment maximum of 966 to 1066. The minor amendment request seeks approval from the Commissioner to revise the wording in portions of the Bylaws under *Section 1: General Provisions*, 1.5 and under *Section 2: Board of Trustees*, 2.1, 2.2, 2.5.

Complaints

There was one official complaint made to the Board of Trustees this past year. On October 12, 2010, a male student was involved in an incident of sexual harassment. The student was assigned a 9-day suspension for his actions. The parents of the student sent a letter to the Executive Director requesting an appeal of the suspension. The Executive Director responded with a letter stating there was no appeal for suspensions that are ten days or less. The parents, with the council of an attorney, sent a letter and formal complaint to the Board of Trustees Chair. The parents stated in the letter of complaint that the Executive Director cited the suspension process from the School Code of Conduct, which was different than the School Code of Conduct provided in the Student Handbook. They argued that their son did not receive due process. They further stated that the policy regarding Sexual Harassment in the Student Handbook was too vague.

The Board of Trustees made the decision to rescind the suspension based on the ambiguity of the guidance. The student was permitted to return to school. The school administration took the necessary action, rewriting and clarifying the Student Handbook and developed the AMSA Bullying Prevention and Intervention Plan, submitted to the state in December 2010.

Oversight

The Board of Trustees regularly and systematically assesses the performance of school wide goals outlined in the Accountability Plan. The Finance Committee works closely with the Business Manager and is current on the financial status of the school. The Finance Committee Chair reports regularly to the board. The Education Committee works actively with the Academic Leadership Team on curriculum, pedagogy, and finishing the upper school curriculum through grade 12. The Education Committee reports regularly at the Board of Trustees meetings. The student representative to the Board of Trustees reports on student issues and concerns. Parents are encouraged to participate in the public comment segment of the monthly board meetings. The Registrar keeps board members apprised of the enrollment and attrition statistics. The Board makes effective and timely evaluations based on information presented by its committees, staff and AMSA students. If needed, the Board assigns an administrator or Board member to take action on an item that is recorded in the minutes and is reviewed at the next meeting.

In March of this year, Barbara McGann gave the Board notice that she would be retiring at the end of the school year. The Board formed a search committee to find a new long-term school leader. The Board met on Tuesday, April 5, 2011 to create both the Job Description and the process that they would follow during the selection of a new school leader. During this meeting, they agreed that a successful selection process must be both inclusive of the various constituents' perspectives on the needs of the school and transparent to the public eye. The Board took the following actions:

- Published an early draft of the job description for public comment and refinement
- Advertised in the local media to attract early candidates
- Interviewed with Recruiting Firms to assist with Search
- Discussed the Job Description and Selection Process at an open meeting, strongly encouraging parents and staff to attend
- Held phone interviews and selected strong candidates for further interview
- The final candidates interviewed in a "round robin": three interview rooms with three board members in each room. Each group focused on one of three areas: curriculum and pedagogy, school administration, and finance and facilities.
- The Board spent many hours interviewing candidates, making the final decision on July 13, 2011, when the Chair offered John Brucato of Milford, Massachusetts the position of Executive Director.

Board Planning

Over the past school year, the Board of Trustees has worked with administrators and teachers to accomplish two important goals related to the upper school curriculum: accommodating the requirements of the College Board, and adding seat time to Foreign Language. To accomplish these goals, AMSA's challenge was to adjust the upper school seat time in math and science to better align the curriculum with the Massachusetts Curriculum Frameworks and to guarantee that our students are in the strongest position for submitting college applications. It is important to note that while there have been minor adjustments made to the schedule, the curriculum remains faithful to the charter, covers all the content outlined in the charter and preserves the interconnections between subjects.

Family Engagement

AMSA conducts periodic family satisfaction and staff satisfaction surveys during the school year. The school employs the use of a tool called *Survey Monkey™* which guarantees complete anonymity. Results are included in the *Accountability Plan Specific Measure* relating to parent surveys previously discussed on pages 20 and 21.

Safety

AMSA is committed to providing students and staff with a safe learning environment that is free of harassment and discrimination. This commitment is an integral part of our combined efforts to promote learning, and to prevent and eliminate all forms of bullying and other harmful and disruptive behavior that can impede the learning process.

AMSA provides all students in grades 6-12 with age-appropriate instruction on bullying prevention. Bullying prevention is incorporated into the Health and Physical Education curriculum and during Advisory Period in grades 6-8. Effective instruction includes classroom activities, school wide initiatives, and focused strategies for bullying prevention and social skills development.

The Dean of Students and Assistant Dean provide instruction and guidance to students about the resources and services available to them as defined in the AMSA Bullying Prevention and Intervention Plan. Daily routines designed for morning homeroom, lunch period, and Directed Study during the last period of the day (for grades 6-8), reinforce healthy student interaction and respectful behavior.

The adjustment counselors for grades 6-8, collaborated with the Deans and homeroom teachers to present social skills and team building programs to students. One such program is the research based Second Step™ curriculum. The AMSA community is encouraged to be aware of bullying and to get involved in the prevention and intervention process, “see something, say something”.

AMSA actively collaborates with the Parent Teacher Organization (PTO) to support the school’s efforts to maintain a safe environment. The PTO sponsors events that focus on safety, bullying, community building, and communication between parents, students, and staff. AMSA informs parents or guardians about the bullying prevention and intervention curricula that is used. Notices included information about the dynamics of bullying, including cyber-bullying and online safety. All notices and information were posted on the school website.

Employee Qualifications

100% of AMSA teachers are Highly Qualified and meet all applicable state and federal qualifications and standards. Teaching qualifications are verified through the Department of Elementary and Secondary Education resources (ELAR). All staff are expected to comply with all state mandated regulations and trainings, such as the State Ethics Conflict of Interest Training. The Business Office processes a CORI check prior to any employee hire.

Financial Oversight

AMSA develops budgets that are realistic and in support of student achievement. The budget planning process begins with the Business Manager collecting data: reviewing past year budgets; calculating enrollment, tuition and attrition numbers; meeting with department chairs and administrators to discuss needs for staffing, textbooks, technical equipment, and other materials; calculating facility expenses; and estimating the amount of income generated through grants and fundraising.

Enrollment is the main source of income for the school. Enrollment and attrition numbers are crucial to the school’s budget. Salaries comprise the greatest percentage of educational expenditures. Estimates for future enrollments are used to verify staffing needs and projected costs of instructional supplies, equipment and facility needs. Faculty staffing requirements are calculated using a formula that determines the teacher/student ratio per subject based on the school wide academic schedule for an upcoming year. Enrollment also drives the projected need for administrative personnel, support staff, maintenance staff, nurses, and educational support staff. The school’s contribution to active and retired employee health insurance premiums is estimated through historical data and future projections of staffing requirements.

Realistic budget requests for equipment and educational materials are established through consultations with department chairs, curriculum administrators, coordinators

and program managers. Budget requests specify a description of time, quantity, estimated unit and total prices, and a brief justification of request.

When there is sufficient data, the Business Manager meets with the Executive Director, the Finance Committee, the Board of Trustees Chair and Vice Chair. When the budget is agreed upon at this level, it is then prepared by the Business Manager to be presented to the board by the Finance Committee Chair at the next Board of Trustees Annual Meeting where it is approved by a majority vote.

Financial statements indicate that AMSA is fiscally sound and stable. The school has received unqualified opinions on annual independent audits. AMSA has increased its net assets since 2005, and ended each year with a balanced budget.

The school implements an effective system of internal controls over revenues, expenses, and fixed assets, and exercises good business practices. Every year the accounting firm of Alexander, Aronson, Finning and Company has audited AMSA. The audit results have consistently demonstrated that AMSA uses sound financial practices and remains financially stable.

Recruitment, Enrollment, and Retention Strategies for Prior School Year

AMSA advertises in local papers in the three prevalent languages of the district, English, Portuguese, and Spanish. AMSA hosts Open House events that are open to the community at large to provide families with AMSA's philosophy and mission and allow them to tour the school buildings and meet teachers and staff.

In the fall, a group of AMSA students and teachers engaged in a neighborhood outreach program, aimed at introducing AMSA to the Portuguese and Spanish speaking families in our district. To support this population, AMSA now employs a licensed ESL teacher and a bilingual teacher on the support team.

Retention in grades 6-8 is very high. However, between grades 8 and 9, it is common for some students to decide to return to their hometown public high school or transfer to private prep school. However, in the first few years in operation, AMSA experienced a high attrition rate between grades 8 and 9 due to the experimental nature of the high school curriculum and a concern among parents that AMSA would not be able to provide their students with a competitive academic profile. AMSA developed several strategies to address this concern. AMSA adjusted the high school curriculum to better align with the Massachusetts Curriculum Frameworks, built three state of the art science labs, and added more seat time to foreign language to guarantee that our students would be in a strong position when submitting college applications. Several Advanced Placement courses were included in the curriculum and a better selection of electives was offered to our high school students. AMSA hired a college counselor, joined the National Honor Society, and developed a strong and fast growing athletic program.

Due to these changes, confidence among our parents and students increased dramatically as demonstrated by the steady and significant decrease in attrition. Student attrition between grade 8 and 9 was 33% in 2009, down to 19% in 2010 and down further to a reasonable 15% in 2011.

Recruitment and Retention Plan

General Recruitment Activities	
List recruitment activities undertaken each year which apply to all students	
<p>Open House in the Fall to introduce the school and educational model to the community at large</p> <p>AMSA advertises in local papers in English, Portuguese, and Spanish</p> <p>AMSA promotes its mission and vision via website, newspapers, and cable television</p> <p>AMSA academic and athletic achievements are advertised in local newspapers</p>	

Recruitment Plan Goals and Strategies	
List goals and strategies for recruitment activities for each demographic group	
Special Education Students	<ol style="list-style-type: none"> 1. Revitalize the SEPAC (Special Education Parent Advisory Committee) 2. Hire experienced and licensed Special Education Administrator 3. Additional licensed special education teachers to department 4. Open House events
Limited English-Proficient Students	<ol style="list-style-type: none"> 1. Continue outreach in Portuguese and Spanish speaking neighborhoods, cultural centers, and churches 2. Students and teachers attend local cultural events 3. Licensure for the ESL Coordinator 4. Early screening and identification of new ELL students
Students eligible for free or reduced lunch	<ol style="list-style-type: none"> 1. Inform district family support centers, Headstart programs of lottery 2. Outreach at local churches, community centers, WIC programs 3. <i>Leaders of Tomorrow</i> continue to volunteer with Habitat for Humanity
Students who are sub-proficient on MCAS	<ol style="list-style-type: none"> 1. Continue to publicize the mission and vision of AMSA in the district 2. Publicize the achievement of AMSA students on MCAS scores
Students at risk of dropping out of school	<ol style="list-style-type: none"> 1. Continue to publicize the mission and vision of AMSA in the district 2. Publicize the achievement of AMSA students on MCAS scores
Students who have dropped out of school	<p>Does not apply</p> <p>AMSA does not enroll students in grades 10-12</p>
Other subgroups of students who should be targeted to eliminate achievement gap	<ol style="list-style-type: none"> 1. Outreach programs in our region of service, Marlborough, Hudson, Maynard and Clinton, providing information about lottery 2. AMSA families network within their churches, social organizations, community affiliations, and child services 3. AMSA website and cable television

Overall Student Retention Goal	
Goal for student retention:	AMSA expects approximately 97% student retention, except in grade 8. AMSA has experienced the highest attrition between grade 8 and 9. Through strategic planning and targeted adjustments to the upper school, The retention rate for grade 8 is projected at approximately 15%.

Retention Plan Goals and Strategies	
Retention Activity 1	Add additional AP courses to High School curriculum Add more choices in electives to High School curriculum
Retention Activity 2	Identify struggling students early and implement tutoring programs: Soaring Eagles for ELA, Math tutoring, and MCAS support, Promote the use of Study Island MCAS preparatory program that is available to all students
Retention Activity 3	Identify students who are in the "Needs Improvement" or "Failing" category based on their 10th grade MCAS scores and develop and implement an EPP as soon as they return to school in grade 11
Retention Activity 4	School and PTO sponsored scholarships for Low Income students Scholarships include: uniforms, athletic fees, field trip fees, summer reading books, miscellaneous school events
Retention Activity 5	Revitalize SEPAC (Special Education Parent Advisory Committee) Our SEPAC parent leader moved out of the area. Building a strong SEPAC will be one of many focus areas for our new Licensed Special Education Administrator
Retention Activity 6	Additional Licensed Special Education Support Staff
Retention Activity 7	The school will call a student's parent/guardian in the morning if a student is absent without confirmation by the parent/guardian

Dissemination

AMSA's goal is to be a visible, engaged, and inviting ambassador of an alternative approach to education. We frequently host visitors from traditional schools, charter schools and founding groups who want to see the learning process and observe our classes. We have also invested in Atlas Rubicon so we can routinely share our curriculum. The doors are always open and our students and teachers are accustomed to observers going in and out of the classrooms, asking questions and sharing their thoughts. Our students are our best ambassadors. The students have done an excellent job of leading dozens of tours during our Open Houses. Over the past five years, visitors have included interested parents and students, educators, leaders of industry and academia, local politicians, Senator James Eldridge, Congressman Jim McGovern, and the Governor of Massachusetts.

There are several examples of widespread interest in AMSA's unique educational model. Last year, educators from Michigan planning to replicate the AMSA Charter School model in Detroit contacted us. Reverend Constance Harvey visited our school last year and made a second visit this year. Attempts to get their charter approved for the Rosewood Academy in Detroit was not successful, but they will continue to pursue their mission.

AMSA hosted visits by two current graduate students of Harvard University studying Education Policy and Management. The students wanted to learn more about charter schools in Massachusetts. They received a tour in which they were able to see our classrooms in action. They also spent time with the Executive Director to ask additional questions.

AMSA's Development Officer attends monthly meetings hosted by the Marlborough Regional Chamber of Commerce's School to Business Committee, regularly updating other local schools and business representatives on AMSA's enrollment, curriculum, after school activities, and achievements.

In an effort to share our best educational practices and curriculum with the Marlborough Public Schools, AMSA administrators met with four members of the Marlborough School Committee and the Assistant Superintendent last year to discuss sharing, in particular, our mathematics curriculum. This year Marlborough initiated its own STEM program.

Two AMSA teachers filed for CSTA (Computer Science Teacher's Association) Chapter Leadership so they could form the first chapter in Massachusetts. They were given Co-President status, received approval from National CSTA, and held the first Computer Science Teacher's meeting at MTC. The meeting had an outstanding attendance with support from Google, UMASS Lowell professors, CAITE and MTC. These two AMSA teachers organized professional development for approximately 40 Computer Science teachers in the Massachusetts area. Monthly meetings continue since inception of the chapter and participation is increasing.

The culmination of six years of hard work was celebrated in June when we graduated our pioneer class of 2011. We have seen the results of enduring dedication and faithfulness to the AMSA mission, inspiring us to share our philosophy, vision, and best practices with anyone willing to strive for excellence.

**Advanced Math and Science Academy Charter School Financial Statement
FISCAL YEAR 2011**

Preliminary and Unaudited

July 2010-June 2011

Ordinary Income/Expense

Income

Tuition	10,730,986.00
Grants- government	285,095.35
Nutrition funding	27,591.01
Program Fees	691,117.21
Contributions .Other/Fundraising	16,764.46
Contribution-in kind Transport	198,000.00
Other Income	10,833.86
Investment Income	9,566.09

Total Income **\$ 11,969,953.98**

Gross Profit **\$ 11,969,953.98**

Expense

Personnel Costs	6,544,289.36
Students Costs	455,242.37
Occupancy	1,876,916.30
Other Operating Expenses	314,045.01
Program Expenses	706,426.47
Depreciation	339,370.20
Misc expenses	198,000.00

Total Expense **\$ 10,444,289.71**

Net Ordinary Income 1,525,664.27

Net Income **\$ 1,525,664.27**

**Advanced Math and Science Academy Charter School
FISCAL YEAR 2011 BALANCE SHEET**

Preliminary and Unaudited

June 30, 2011

ASSETS

Current Assets		
	Total Checking/Savings	4,004,120.31
	Total Accounts Receivable	53,614.45
	Total Other Current Assets	57,262.04
	Total Current Assets	\$ 4,114,996.80
	Total Fixed Assets	925,508.66
	Total Other Assets	33,333.00
TOTAL ASSETS		\$ 5,073,838.46

LIABILITIES & EQUITY

Liabilities

Current Liabilities		
	Total Accounts Payable	274,027.52
	Total Other Current Liabilities	626,372.01
TOTAL CURRENT LIABILITIES		\$ 900,399.53

Equity

TOTAL EQUITY	\$ 4,173,438.93
---------------------	------------------------

TOTAL LIABILITIES & EQUITY	\$ 5,073,838.46
---------------------------------------	------------------------

**Advanced Math and Science Academy Charter School
Fiscal Year 2011 Budget**

Approved by the Board of Trustees

FY 2012 Budget-Approved

Income

Tuition	10,746,674
Grants- government	180,866
Nutrition funding	22,306
Program Fees	740,718
Contributions Other/Fundraising	100,000
Investment Income & Other Income	19,006
Total Income	\$ 11,809,570

Expense

Personnel Costs	7,187,671
Students Costs	524,884
Occupancy	2,467,013
Other Operating Expenses	483,218
5005-Program Expenses	609,179
Depreciation	322,763
Total Expense	11,594,728
Net Income	\$ 214,842

Fixed Assets

Non-Cash Adjustment Depreciation	322,763
Technology, Furniture, Leasehold Improvement	298,908
Net Income less Fixed Assets	\$ 238,697

CAPTIAL PLAN

Description of project	Current status	Completion ETA	Estimated cost
Science Labs in Building 199	Completed	2010	\$75K Chemistry Lab \$40K Physics Lab \$65K CS Labs
Ceiling Mount Projectors with sound systems in every classroom	In progress	Dependent upon funds	\$200K
Interactive Whiteboards	Ongoing	Ongoing	Full install with projector and integrated sound \$ 6K-7K per classroom- with existing ceiling mount - \$2.5K per classroom
Gigabit Ethernet Switches <i>Upgrade network infrastructure- install high end backbone switch and upgrade current Ethernet switches with higher end speed</i>	In progress	Replace some of the 10/100 switches in summer 2010 Project completion by September 2011	\$30K
SAN (Storage Area Network) <i>Purchase and install storage area network: AMSA plans to protect school data with a high availability SAN</i>	Planning	Summer 2010	\$75K
Server Virtualization <i>Ensure 100% server availability after installing high availability SAN</i>	Planning	Winter 2013	\$75K
Language lab Comparing the Sony Virtuoso and the Robotel Symposium	Planning	Dependent upon funds	\$200K-\$250K
Student Desks <i>Replacement of old student desks in building 199 and 201-362 total</i>	Planning	Ongoing	\$48K

CAPTIAL PLAN (continued)

Description of project	Current status	Completion ETA	Estimated cost
Interior painting of school	Not started	No schedule	\$65K
Installation of rubberized covering on all wooden stairwells in building 210	Completed	August, 2010	\$6K
Acquisition of plant property to house AMSA campus: <i>165 Forest Street</i> <i>199 Forest Street</i> <i>201 Forest Street</i>	Planning		\$2.5M estimated upfront costs: \$1M for down payment \$1.5M for the purchase balance \$25K closing costs <i>Financed with a mortgage for a total of \$20M over life of loan in collaboration with TD Bank, Mass Development</i>
Installation of key card reader system at all building entrances: <i>165 Forest Street</i> <i>100 Forest Street</i> <i>201 Forest Street</i>	Not started	No schedule	\$3,100 \$3,400 \$5,600
Purchase of small buses for athletic team transportation	Completed	July, 2011	\$87K
National Grid energy conservation project: <i>Retrofit light fixtures with energy saving bulbs and fixtures in buildings 199 and 201</i>	Planning	No schedule	Total cost \$48K <i>Total cost to AMSA is \$12K with National Grid's Energy Saving Plan incentive program</i>
Modernization of classrooms with energy saving materials: e.g., replace tiles and carpet with industrial strength recycled materials School, In Lower School	Planning	No schedule	Unknown

Capital Project Reserve Funds

Capital project reserves are in a Money Market fund included in the Total Checking and Savings amount of \$4,004,120.31, listed among the Current Assets on the FY 2011 BALANCE SHEET (see page 31).

The balance of the Money Market Account is currently \$3,804,405.00.

DATA SECTION

INSTRUCTIONAL TIME	
Total number of instructional days for the 2009-2010 school year	180
First and last day of the 2009-2010 school year	9/31/10, 6/22/11
Length of school day (Exception: Early dismissal at noon- 5 days total)	8:00 am - 3:15 pm

STUDENT ENROLLMENT INFORMATION	
Number of students who completed the 2008-2009 school year but did not reenroll for the 2009-2010 school year	78
Total number of students enrolled as of October 1, 2010	963
Total number of students who enrolled during the 2010-2011 school year after October 1, 2010	10
Total number of students who left during the 2009-2010 school year after October 1, 2010	9
Total number of students who enrolled as of the June 30, 2011 SIMS submission	963
Number of students who graduated at the end of the 2010-2011 school year	62
Number of students on the waitlist as of June 30, 2011	509

Summary of reasons for student departures:

REASON FOR DEPARTURE	Number of Students
Returning to hometown High School	41
Moving out of state	1
Moving out of the country	2
Attending private school	8

STUDENT DEMOGRAPHIC AND SUBGROUP INFORMATION (as of June 2011 SIMS)		
Race/Ethnicity	No. of Students	% of entire student body
African-American	21	2%
Asian	253	26%
Hispanic	49	5%
Native American	5	<1%
White	619	64%
Native Hawaiian, Pacific Islander	1	<1%
Multi-race, non-Hispanic	15	2%
Special Education (IEP only)	44	5%
Limited English Proficient	14	1%
Low Income	56	6%

ADMINISTRATIVE ROSTER

Title	Brief Job Description	Start Date	End Date (if no longer employed)
Executive Director	Responsible for the overall management of the school	May 2008	June 30, 2011
Principal	Responsible for the faculty and curriculum development	March 2010	
Special Ed Coordinator	Oversees Special Education Department	July 2010	
Business Manger	Accounting, Financial reporting, audits, cash management, payroll, insurance, purchasing, and HR	August 2005	
Operations Manager	Oversees the facilities, transportation, lunch program, and maintenance	August 2007	
Registrar	Oversees admissions, student files and data	May 2008	
IT Director	Responsible for information technology	December 2007	
Dean of Students	Responsible for lower school student discipline, social curriculum	July 2007	
Athletic Director and Assistant Dean	Oversees Athletic Department Responsible for upper school student discipline	July 2010	

TEACHERS AND STAFF ATTRITION FOR THE 2010-2011 SCHOOL YEAR

	Number as of the last day of the 2010-2011 school year	Departures during the 2010-11 school year	Departures at the end of the 2010-11 school year
Teachers	72	0	10
Other Staff	38	1	1

Four teachers did not have their contracts renewed.
 Two teachers moved out of state.
 One teacher accepted a teaching position closer to her home.
 One teacher left to become a private consultant
 One teacher left on maternity leave
 One teacher left to become a department head at a private math academy.

The Assistant Business Manager left in April due to the long commute.
 The Executive Director retired at the end of the school year

AMSA ADMINISTRATION ORGANIZATIONAL CHART 2010-2011



*Board of Trustees: Henry Haugland, Craig Holbrook, Robert Ledoux, Anton Teodorescu, John Lomot, Anna Charny, Joseph Sweeney, Mark Sweeney, Roger Jarrett, Craig Holbrook, Karla Talanian, Rashid Shaikh, Barbara McGann

BOARD MEMBERS FOR THE 2010-2011 SCHOOL YEAR

Name	Position	Committee affiliation	Area of expertise and/or additional role at school	Number of terms served, length of each term, election and expiration
Henry Haugland	Chair	Governance	Science/Tech,	2 terms: 2006-2009 2009-2012
Craig Holbrook	Vice Chair	Communications	Strategic Planner Parent	1 term: 2009-2012
John Lomot	Treasurer	Finance Chair	Finance, Parent	2 terms: 2007-2010 2010-2013
Anton Teodorescu	Secretary	Governance Chair	Science/Tech, Parent	2 terms: 2005-2008 2008-2011
Jay Sweeney	Trustee/ Teacher Rep	Education	Engineering, Faculty	1 term: 2007-2010
Roger Jarrett	Trustee/ Parent Rep	Bus Task Force	Science, Parent	1 term: 2008-2011
Robert Ledoux	Trustee	Education	Science/Tech, Parent	2 terms: 2005-2008 2008-2011
Mark Sweeney	Trustee	Development/ Facilities	Real Estate Dev, Parent	1 term: 2008-2011
Karla Talanian	Trustee	Education Chair	Science, Parent	1 term: 2009-2012
Rashid Shaikh	Trustee	Communications Chair	Communications, Parent	1 term: 2010-2013
Anna Charny	Ex officio Chair emeritus	Education	Math, Parent	2 terms: 2004-2007 2007-2010
Barbara McGann	Ex officio	Finance and Education	Executive Director	1 term: 2008-2011