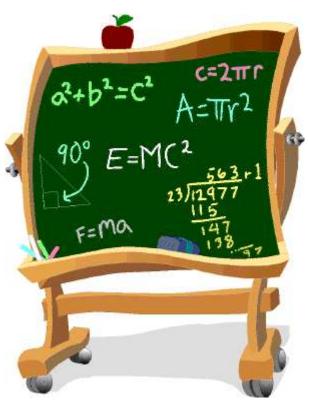


# 2011-2012 Annual Report



### Vision

To be an innovative, sustainable model of academic excellence that creates well-rounded, lifelong learners and global citizens.

### Mission

To offer intense math and science experiences and challenging opportunities in the arts and humanities.

To develop lifelong learning skills, including critical thinking, effective time management, and collaboration with peers.



# Math and Science Academy

A Minnesota Charter School

8430 Woodbury Crossing Woodbury, Minnesota 55125 651-578-7507 www.mnmsa.org

# 2011-2012 ANNUAL REPORT

Submitted to: Minnesota Department of Education 1500 Highway 36 West Roseville, Minnesota 55113-4266

> Submitted October 1<sup>st</sup> 2012

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## Introduction

The Math and Science Academy (MSA) opened in the fall of the 1999-2000 school year and serves students grades six through twelve. MSA places tremendous value on a school design that is curriculum based, standards driven, and collaboratively run. The curriculum places emphasis in the areas of math and science with a balance of humanities. The agreed upon standard requires that students achieve far beyond current state mandates and testing criteria. Every student at MSA is required to complete a math program through calculus and a high school science program that includes biology, chemistry, and physics. In addition, all students at MSA are required to take social studies and English every year, Spanish through the 11<sup>th</sup> grade, and at least one year of high school fine arts. Thus far, after eleven graduating classes, only five seniors have failed to graduate on time and over 90% of the students have pursued either a two or a four-year degree program. Moreover, while the state of Minnesota has led the nation in ACT scores the last four years with an average composite of 22.8, the average composite MSA ACT score over the past three years has been 28.1.

Not only does MSA stress such core curriculum areas as math, science, english, social studies, and world language, but also boasts a music program with a full time music instructor, who has expanded the program to include after school choir, a string orchestra, and jazz band. In addition, MSA students can further enhance their extracurricular experience by participating in a variety of after school activities including a Minnesota State High School League (MSHSL), cross country team, a MSHSL Nordic Ski team, a MSHSL boys basketball team, a MSHSL baseball team, a MSHSL track team, as well as club level recreational sports such as girl's basketball, academic teams, theater, National Honor Society, Student Council, Academic Triathlon, Lego League Robotics, FIRST Robotics, Spanish Club, Art Club, international field trip offerings, and other various school-sponsored social events and dances.

It is MSA's policy to provide equal educational opportunity for all students. The Math and Science Academy does not unlawfully discriminate on the basis of race, color, creed, religion, national origin, sex, marital status, parental status, status with regard to public assistance, disability, sexual orientation or age.

In the spring of 2010, the MSA Board of Directors took time to review and rewrite the mission, vision, and core values of the school. The goal of this activity was all part of the process of strategic planning that continued throughout the 2011-2012 school year. As such, the mission, vision and core values of MSA now read as follows:

### Vision

To be an innovative, sustainable model of academic excellence that creates well-rounded, lifelong learners and global citizens.

### Mission

To offer intense math and science experiences and challenging opportunities in the arts and humanities. To develop lifelong learning skills, including critical thinking, effective time management, and collaboration with peers.

### Core Values

We will foster a safe environment where every voice is heard and individuals are free to take risks.

We will continue to improve performance and recognize outstanding achievement.

We will empower students to develop skills in time management, self-discipline, and critical thinking.

We will continuously evaluate and improve our program to ensure the highest quality of education.

We will encourage networking, collaboration, and open communication between all members of our community.

### Governance

MSA is governed by a Board of Directors (BOD) that is comprised of a membership in accordance with Minnesota statute and consists of three (3) parents (or legal guardians) of enrolled students, five (5) licensed teachers who are employed by MSA at .5 FTE or above, one (1) community member who is not employed by the school and does not have a child enrolled in the school, and a non-voting student enrolled at MSA in grades 9-12. The Executive Director and Chief Financial Officer sit on the board as ex-officio, non-voting members. According to MSA by-laws, an election is held each year on the first Tuesday in November (the actual date is set by the BOD on the recommendation of the BOD Election Committee). Elected board members serve a two-year term starting in the month of January after the fall election. In May 2012, the BOD voted to amend its by-laws to change the BOD composition to three (3) parents, four (4) teachers, and two (2) community members. These changes will take effect January 2013.

MSA Board Meetings are held on the third Thursday of each month. There are eleven standing committees that meet monthly or as needed: Academic, Alternative Funding, Building Maintenance, Enrollment, Finance/Budget, MN State HS League, Parent Team, Personnel, Policy, Student Committee, and Technology. The BOD routinely conducts workshops to address the larger issues, thereby giving the community a chance to participate with respect to all issues brought before the BOD.

The 2011-2012 BOD members are listed below in order of officers and term expiration date.

Board Member	Officer Position	Term Expiration	Representation
Cheri Howe (651) 353-2312 chowe@mnmsa.org	Chair – present Vice Chair	12/31/12	Teacher
Craig Creeger (651) 361-0457 craig.creeger@gmail.com	Chair	12/31/12 (resigned 4/10/12)	Parent
Sandeep Chandak (651) 739-8458 schandak123@yahoo.com	Vice Chair - present	12/31/13	Parent
Lucretia Keller (651) 353-2303 lkeeler@mnmsa.org	Vice Chair	12/31/11 (resigned 8/23/11)	Teacher
Michelle Richards (651) 353-2306 mrichards@mnmsa.org	Vice Chair	12/31/11	Teacher
Lori Nixon (651) 734-1729 msabodlori@gmail.com	Treasurer – present	12/31/12 (appointed to complete parent term)	Parent
Cynthia Bluhm (651) 325-7197 cbluhm@gmail.com	Treasurer	12/31/12	Parent
Rachael Erickson (651) 214-3586 rerickson@mnmsa.org	Secretary – present	12/31/12	Teacher

The 2011-2012 Board of Directors Members (Continued)

Board Member	Officer Position	Term Expiration	Representation
	Officer Tosition	Expiration	Kepresentation
Julie Runge (651) 736-0428	Cogratary	12/31/11	Parent
` '	Secretary	12/31/11	Parent
jkrunge@mmm.com Lisa Anderson			
		10/21/12	TD 1
(651) 353-2370		12/31/13	Teacher
landerson@mnmsa.org			
Jerry Hall		10/01/10	
(651) 431-1047		12/31/13	Community
jwhall2@mmm.com			Member
David Halstead			
(651) 354-1589		12/31/13	Teacher
dhalstead@mnmsa.org			
Michelle Kurkoski			
(651) 431-1047		12/31/12	Teacher
mkurkoski2mnmsa.org			
P.J. Flanagan			
(651) 733-2197		12/31/11	Community Member
pjflanigan@mmm.com			
Bronwen Williams		12/31/11	
(651) 353-2309		(appointed to	Teacher
bwilliams@mnmsa.org		complete	
		teacher term)	
Ali Creeger	Non-voting	6/5/12	Students
Paul Simone	Director		
(651) 353-2317	Ex-Officio Member		School District
psimone@mnmsa.org	Non-voting		
Judith Darling	CFO		
(651) 463-5533, x202	Ex-Officio Member		School District
judith@bkda.org	Non-voting		

# **MSA School Management & Administrative Team**

MSA is fully compliant with all statutes and contract provisions regarding school management and operations.

# **Administrative and Support Staff Information**

Paul Simone	Executive Director District Professional Administrative	File Folder #324604
Lisa Boelter	Lisa Boelter Office Manager	
Bruce Monroe	Bruce Monroe Academic Director	
Judith Darling Financial Manager		Beltz, Kes, Darling & Associates
Joyce Lawrence	Office Assistant	
Carrie Brookins	School Psychologist	File Folder # 368171

### **School Director Biography**

Paul Simone is a founding faculty member of the Math and Science Academy. As school director, he also serves as an ex-officio member of the MSA Board of Directors. He has a BA and MA degree from the University of St. Thomas, he is a licensed 7-12 social studies teacher – all subjects, a K-12 licensed administrator, and is currently enrolled in the doctoral program in educational leadership at the University of St. Mary's of Minnesota. Paul is a 20 year career educator with experience in West St. Paul, St. Paul, and South Washington County Schools. He began as a social studies teacher at MSA and has been the director of MSA since the fall of 2002.

# **Teaching Staff Information**

For the 2011-2012 school year, 100% of the MSA teaching staff were recognized as highly qualified and fully licensed.

	File		2011-12
Name	Folder# Licensure Area		Teaching Assignment(s)
Stacy Ann Bartlett	361292	7-12 Life Sciences	6 <sup>th</sup> Grade Life Science
	301292	5-8 Science	9 <sup>th</sup> Grade Biology
Margaret Catherine		7-12 Grade	7 <sup>th</sup> Grade English
Burggraaff	376388		
		English/Language Arts	11 <sup>th</sup> & 12 <sup>th</sup> Grade Composition
	416675	5-12 Social Studies –All	6 <sup>th</sup> & 9 <sup>th</sup> Grade Social Studies
Michelle Marie Kurkoski			
		1-6 Elementary Education	
Norma Patricia Haymas	306086	K-12 Physically	8 <sup>th</sup> & 9 <sup>th</sup> Grade Spanish
Norma Patricia Haynes-	300080	Handicapped	8 & 9 Grade Spainsh
Guerra		K-12 Spanish	
	415900	K-6 Elementary Education	7 <sup>th</sup> Grade Earth Science
Cheryl Ann Howe	413900	5-8 Science	/ Grade Earth Science
		K-12 EBD	
Marilyan T. Vanlan	162537	K-12 LD	Special Education
Marilynn T. Kaplan		K-12 Physical Education	

# Teaching Staff for 2011-2012 (Continued)

	File		2011-12 Teaching
Name	Folder#	Licensure Area	Assignment(s)
Amy Otteson	360833	K – 12 Visual Arts/K-12	6 <sup>th</sup> – 12 <sup>th</sup> Art
Timothy Michael Tydlacka	360146	7 – 12 English/Language Arts	9 <sup>th</sup> , 11 <sup>th</sup> & 12 <sup>th</sup> Grade English
Susan Mooney Vare	389698	7 – 12 Social Studies	10 <sup>th</sup> – 12 <sup>th</sup> Grade Social Studies
Steven Lee Pullar	374091	7 – 12 Physical Science	10 <sup>th</sup> – 12 <sup>th</sup> Grade Chemistry & Physics
Michelle Nicole Richards	403184	7 – 12 English/Language Arts	8 <sup>th</sup> Grade English Language Arts
Lisa Anderson	369704	7 – 12 Social Studies	7 <sup>th</sup> & 8 <sup>th</sup> Grade Social Studies
Jerry Clark Shelton	264285	K – 12 Music	6 <sup>th</sup> – 12 <sup>th</sup> Music
Maria Pilar Sustic	Maria Pilar Sustic  371987   7 - 12 Spanish   K - 12 Visual A		7 <sup>th</sup> , 10 <sup>th</sup> , & 11 <sup>th</sup> Grade Spanish
Bronwen Kendrick Williams	398286	7 – 12 Mathematics	7 <sup>th</sup> – 11 <sup>th</sup> Grade Mathematics
Kenneth James Thielman	382640	7 – 12 Mathematics 5 – 8 Mathematics	6 <sup>th</sup> – 10 <sup>th</sup> Grade Mathematics
Lauren June Zachman	442513	5 – 12 Mathematics	7 <sup>th</sup> – 12 <sup>th</sup> Mathematics
Christa Bren	460282	5 – 12 Mathematics	6 <sup>th</sup> – 11 <sup>th</sup> Mathematics
Molly Elizabeth Molitor	427302	K – 12 Physical Education 5 – 12 Health Education	6 <sup>th</sup> – 12 <sup>th</sup> Physical Education 7 <sup>th</sup> and 10 <sup>th</sup> Grade Health
Mary A Cedarleaf	415447	K – 12 LD K – 12 EBD	Special Education
Rachael A. Erickson	443271	5 – 12 Communication Arts/Literature	6 <sup>th</sup> & 10 <sup>th</sup> Grade English
David Halstead	433703	K – 12 Spanish	6 <sup>th</sup> Grade Spanish
Dan Keller	461581	5 – 12 Social Studies	8 <sup>th</sup> , 11 <sup>th</sup> & 12 <sup>th</sup> Social Studies
Anne Cardenas	430525	5 – 8 Science	8 <sup>th</sup> Physical Science
		9 – 12 Chemistry	

# **Non-Licensed Support Staff**

Name	Work Assignment
------	-----------------

Heather Rosemann	Special Education Assistant
Jinan Wienhandl	Special Education Assistant
Leslie Kurt	Special Education Assistant

# **School Admissions and Enrollment**

### GENERAL STATEMENT OF ENROLLMENT

It is the Math and Science Academy's policy to provide equal educational opportunity for all students. The Math and Science Academy does not unlawfully discriminate on the basis of race, color, creed, religion, national origin, sex, marital status, parental status, status with regard to public assistance, disability, sexual orientation or age.

### **Admission Requirements**

The policy of the Math and Science Academy is to enroll an eligible pupil who submits a timely application, unless the number of applications exceeds the capacity of a program, class, grade level, or building. In this case, pupils will be accepted by lot. The Math and Science Academy gives preference for enrollment to a sibling of an enrolled pupil and to a foster child of that pupil's parents and may give preference for enrolling children of the school's teachers before accepting other pupils by lot. The Math and Science Academy does not limit admission to pupils on the basis of intellectual ability, measures of achievement or aptitude, or athletic ability.

### **ADMISSION POLICIES & PROCEDURES**

Math and Science Academy establishes the following Admissions and Lottery Policy.

POLICY STATEMENT: Admission to Math & Science Academy is open to all students, without regard to ability, race, religion, or any other factors, other than the capacity of the program, class, grade level, or building.

- (1) Each school year, the Board of Directors:
  - a. Initiates by January 1<sup>st</sup> the open enrollment period applicable to the following school year's admissions.
  - b. Posts on the Math and Science Academy website by January 1<sup>st</sup>:
    - (i) Math and Science Academy's enrollment application applicable to the following school year, and
    - (ii) this Admissions and Lottery Policy.
  - c. Establishes and publishes by the February board meeting, the Available Enrollment by Grade applicable to the following school year.
- (2) Notice to Currently Admitted Students & Teachers Employed at the School. Prior to the beginning of the open enrollment period, the school provides notice of the open enrollment period to parents and teachers so that siblings of currently admitted students and children of teachers may submit a timely application.
- (3) <u>Currently Admitted Students Intent to Return.</u> After the open enrollment period, the school asks families to complete an "Intent to Return" form.

- (4) <u>Application Processing.</u> Each enrollment application received is date-stamped and also either time-stamped or sequentially stamped by number designating the order in which applications were received for each such date.
- (5) Admissions. All applications received during the open enrollment period are automatically accepted for enrollment (i.e. admitted) unless more applications are received than the available enrollment established by the Board for the applicable grade(s). In this situation, all submitted applications for such grade(s) are placed in the lottery; however, siblings of currently admitted students and children of teachers employed in school have preference.
- (6) <u>Siblings of Admitted Students.</u> Siblings, who submit an application before the expiration of the open enrollment period, or currently admitted students are automatically admitted unless the number of sibling applications exceed the available enrollment established by the Board for the applicable grade(s). If the number of sibling applications exceeds available enrollment in any grade, a sibling lottery is held for each such grade. Siblings are admitted to the school in order in which they are drawn in the lottery. If all available enrollment in a grade is filled by siblings, the sibling lottery continues and establishes the sibling waiting list, which has preference over both the teacher-children waiting list and the general waiting list.
- (7) Children of Teachers Employed at Math and Science Academy. Children of teachers employed at the school who submit an application before the expiration of the open enrollment period, are automatically admitted provided that all siblings (of already admitted students) who submitted a timely application are admitted, and provided there is available enrollment as determined by the Board for the applicable grade(s). If the number of children of teachers exceeds the available enrollment established by the Board for any grade (and after all siblings (of admitted students) who submitted a timely application are admitted), a teacher-children lottery is held. Children of teachers are admitted to the school in order in which they are drawn in the lottery. If all available enrollment in a grade is filled by children of teachers, the teacher-children lottery continues to establish the teacher-children waiting list for each such grade.
- (8) General Lottery. If the number of applications received during the open enrollment period exceeds available enrollment established by the Board for any grade list, and after all siblings and children of teachers employed at the school who submitted a timely application are already admitted, the school conducts a general lottery. All applications for each such grade(s) (excluding applications from siblings of already admitted students and excluding applications from children of teachers employed at the school) received before the expiration of the open enrollment period are included in the general lottery. Students are admitted to the school in order in which they are drawn in the lottery, as long as there is available enrollment as determined by the Board for the applicable grade(s). If all available enrollment in any grade is filled, the lottery continues and establishes the general waiting list for each such grade in the order drawn, until all applications are drawn. If a student is admitted through the general lottery and that student has one or more siblings in other grades also subject to a lottery, those siblings are automatically admitted as long as available enrollment as determined by the Board remains in the applicable grade(s).
- (9) <u>Applications received after the open enrollment period expires</u> are automatically admitted as long as there is available enrollment as established by the Board in the applicable grade, in the order received. If, or once, there is no available enrollment in any grade, applications are added to the applicable waiting list for each such grade, in the order received.
- (10) The school conducts all lotteries through a method of random selection.

### **General Admission Procedures:**

- (1) **Order of Admission**: Siblings of Already Admitted Students, then Children of Teachers Employed at the School, then General Admissions.
- (2) **No waiting list carry over from year to year**: Each waiting list is subject to a lottery and redrawn during each admission process each year.
- (3) **Multiple births (twins, triplets, etc.)**: Each student seeking admission completes an application (i.e. not one application for the family). In a lottery situation, each student receives an individual number/lot in the lottery.
- (4) **Lottery Grade Order**: Applicable lotteries occur from highest grade to lowest grade.

# **Student Demographics**

Data from the 2011-2012 School Year

Student Population: 378, as of May 31, 2012

68% - Caucasian	22% - Asian	5% - African American	4% - Native American	3% - Hispanic
				_

# Limited English Proficient 1% Special Education 5% Free and Reduced Price Lunch

### Open Enrollment Data from 2011-12 school year

Is this school eligible for open enrollment at any grade level? YES

### Other Enrollment-Related Information Data from 2011-12 school year

**AYP** Attendance Rate



# 2011-2012 Student Enrollment by Grade Level

As of May 31, 2012

Grade	6 <sup>th</sup> Grade	7 <sup>th</sup> Grade	8 <sup>th</sup> Grade	9 <sup>th</sup> Grade	10 <sup>th</sup> Grade	11 <sup>th</sup> Grade	12 <sup>th</sup> Grade	Total
<b>Totals</b>	85	87	80	43	30	28	25	378

### 2011-2012 Withdrawn Students

Grade	6 <sup>th</sup> Grade	7 <sup>th</sup> Grade	8 <sup>th</sup> Grade	9 <sup>th</sup> Grade	10 <sup>th</sup> Grade	11 <sup>th</sup> Grade	12 <sup>th</sup> Grade	Total
Totals	5	2	26	3	6	1	0	43

43 Students left during or after 2011-2012; total for all grades 6-12.

# Academic Performance and 2011-2012 Accountability Data

As of the date of this review, for the school year 2011-2012, the Math and Science Academy (MSA) ranked among the top five MCA math (84%) and reading (97%) scores in the state. On the new multiple measurement ratings, MSA was one of the top two schools in the East Metro area, excluding only one elementary school. MSA had a score of 97.45%.

In breaking down the MCA scores:

For reading in all grades 6, 7, 8, and 10; only 3 students did not meet the standards (none were in  $10^{th}$  grade); only 6 partially met the standards (again, none were in  $10^{th}$  grade); 60 met the standards and 210 exceeded the standards. For  $10^{th}$  grade MCA reading, 20 exceeded the standards, and 6 met the standards.

For math in grades 6, 7, and 8; only 8 did not meet the standards, 30 partially met, 96 met, and 117 exceeded the standards. In 11<sup>th</sup> grade, 12 exceeded the MCS math standards; 11 met the standards; 3 partially met the standards; and 0 did not meet the standards.

All 9<sup>th</sup> graders passed the MCA written test. Of 43 students taking the test, only five got a 3 or 3.5.

Our most recent ACT results showed consistently high scores. The percent of ACT-tested students ready for college level course work shows that 100% of our students tested college ready for college English composition; 88% for college algebra; 96% for college social science and 83% for college biology.

While these are excellent indicators for success in college, the data still shows areas in which to improve. In English composition, math, reading and science, each is the lowest score in the last four years, though the scores for 2011-2012 are still well above each benchmark score. For science the scores from tests taken last year are remarkable - 97.7% for our high school.

One more indicator of academic ability is that last year's juniors (2011-2012), 89.7% scored college ready on the SAT, and two students are National Merit Semifinalists.

### **PSAT Test**

Each year MSA students in grades 9 through 11 are given the PSAT in the fall, and when the test results are reported in December, scores are compared to previous years, as well as to all sophomores and juniors nationwide. This was the eighth year the PSAT was used as a benchmark for reading, writing and math.

The PSAT scores, as they are listed below, represent our students across the areas of reading, writing, and math compared on a national norm, expressed in a percentile. Performance of juniors and above is compared with that of juniors nationwide; the performance of sophomores and below is compared with that of sophomores nationwide. Selection index percentile compares performance of all students, regardless of grade level, with that of juniors nationwide.

**2011-2012 PSAT Test Data** 

Graduating	Critical		Writing	Selection	Year-to-Year
Class of 2012	Reading	Math	Skills	Percentile	% Increase
As 11 <sup>th</sup> Graders	78.41%	74.24%	80.24%	81.55%	15.37%
As 10 <sup>th</sup> Graders	64.48%	70.41%	68.20%	55.20%	24.51%
As 9 <sup>th</sup> Graders	66.61%	68.00%	66.21%	55.52%	NA

### **Comprehensive Educational Program During and After School**

Not only does MSA stress such core curriculum areas as math, science, english, social studies, and world language, but also boasts a music program with a full time music instructor, who has expanded the program to include after school choir, a string orchestra, and jazz band. In addition, MSA students can further enhance their extracurricular experience by participating in a variety of after school activities including a Minnesota State High School League (MSHSL), cross country team, a MSHSL Nordic Ski team, a MSHSL boys basketball team, a MSHSL track team, as well as club level recreational sports such as girl's basketball, academic teams, theater, National Honor Society, Student Council, Academic Triathlon, Lego League Robotics, FIRST Robotics, Spanish Club, Art Club, international field trip offerings, and other various school-sponsored social events and dances.

# **Operational Performance**

MSA has a demonstrated record of providing a rigorous and successful education program for all students. Due to the relatively small size of MSA (approximately 378 students in grades 6-12), it has been less relevant to disaggregate our student data within the typical demographic categories of ethnicity, gender, or educational program. The advantage of our small school size is that MSA staff are able to sufficiently use the individual student data. It is our practice to specifically identify and address the needs of individual students not making adequate progress. The positive result of this is clearly reflected in the successful performance of MSA 9-11th grade students on the state-required graduation assessments.

### **MSA Parent Team Involvement**

MSA is a community created and operated school, that benefits from a well-organized and engaged Parent Team. The Parent Team is an official committee of the MSA Board of Directors (BOD) and provides a means for parents to meet together and work to support MSA. The Parent Team also provides a forum for parent discussion and can be a mechanism for developing recommendations for the BOD. All parents and guardians of MSA students are automatically members of the Parent Team and are invited to attend regularly scheduled meetings. Some activities that have received financial support from the Parent Team in the past include various school clubs and teams, the annual school play, prom, teacher conference dinners, MOL Day, Pi Day, transportation for field trips, school landscaping, all-school assemblies, and Lego robotics.

MSA also solicits input from its families by issuing an annual family satisfaction survey (**See Appendix A for 2011-2012 Parent Survey Results**). The data generated from this survey indicates that parents are quite pleased with MSA. MSA appeals to families because it is a small school governed by teachers and families. At MSA, parents are empowered to make a difference in their child's education. Parents also like to point out the positive social aspects for their students, in that their students are able to find friendships with others who value a good education and attend school with the expectation to learn.

# **Innovative Practices and Implementation**

One of the most significant contributing factors in student academic performance is the effectiveness of classroom instruction. One-hundred percent of MSA teachers are Highly Qualified and fully dedicated to continuous improvement. With quality instruction in mind, the MSA pay scale and staff policies all center on professional development and advancing educational best practices. MSA faculty are encouraged to seek professional development and leadership opportunities (internal and external to MSA) in their academic fields and are monetarily rewarded for their accomplishments. A substantial indication to MSA success is retention year after year. We lost only one teacher going into the 2012-2013 school year.

MSA teachers are required to align their curriculum with both state standards, and in the case of science, national standards. MSA curriculum and instruction is modified as needed by individual teachers and with the guidance and oversight of the MSA Board of Directors.

At MSA, teachers drive staff development decisions in cooperation with the director and the MSA board. The staff development program relies on teachers identifying an annual academic goal for improvement, and then taking the lead to select subject area experts who will then carry out the actual training process. A somewhat unique characteristic of MSA is our use of internal faculty experts in the design and implementation of this process. Some needs that have been considered include advancing the use of technology in the classroom and increasing team and inter-disciplinary instruction. This discussion precedes

the building of the annual school-wide staff development plan. The school-wide staff development plan is specifically designed by faculty experts and supports and sustains the aforementioned MSA goals and annual student academic gains in writing, reading, math, and science.

The 2011-2012 staff development program was in purchasing iPads for faculty and determining best practice use with students. There were three ongoing goals/projects the staff did to assess this staff development activity. First, we asked teachers to try the iPad, explore various apps and applications for their subject area, and assess their impressions via a survey. Secondly, we set up student/teacher focus groups to examine and evaluate library applications—e.g., e-readers, database apps, internet searching and bookmarking, and MLA (Modern Language Association) apps. And lastly, how can using iPads be used to supplant curriculum and materials to better deliver instruction.

While there are many paid apps, we explored the depth to which we can go with free apps at first because there are many to choose from. Education apps can be found easily in the iTunes app store or in online articles and blog posts. And as we used the iPad in different subject areas, a goal was to search out apps appropriate to the curriculum of that subject, gradually building our collection.

### **Productivity Tool, Instructional Tool**

In the teacher phase of the trial, there were two main aspects we looked at: iPads as productivity tools for teachers and iPads as instructional tools for a class. Comments from teachers, particularly about apps for working with students with special needs were the basis of the aforementioned survey. There are some excellent apps for students, including audio recording/notetaking apps (such as AudioNote or Sundry Notes) and an app that will "speak" for students (TaptoTalk). The fact that screens and fonts can be enlarged also proved very beneficial for some students. As one of our special education teachers concurred in our anonymous survey: "The iPad can be excellent for students with special needs. It offers great accessibility for students with physical and mental disabilities.

Additionally, there are many college apps available; many colleges now have apps for tours. English teachers have the MLA App iSource mentioned, the social studies teachers will have various free federal government apps. Beyond the apps themselves, iPads can store anything an iPod can, so it gives teachers great access to iTunes U and other podcasts. The excellent video quality of the iPad makes things such as the TEDTalks very accessible for teachers who might not seek out podcasts or videocasts.

### **Usage Patterns**

As for using the iPads for library research, simple things, such as the speed of the Safari browser is a big advantage. Another ideal feature for working with students is that you can set specific websites as "apps" on the desktop. So your school homepage, database page, or research site can all become one-touch apps. Thereby no more trying to convince students to wade through link after link to reach a particular database site. The iPad makes searching using academic tools far more accessible for students.

Adding some brainstorming apps (such as Popplet Lite and Brainstorming by ideaWallets) allows students to use the iPad to brainstorm topics or reorganize their ideas. Evernote, Flipboard, or the Delicious app help students collect pages, graphics, and links relating to their research. And iSource MLA provides a quick way for students to assemble a list of their sources.

### iPads as E-Readers

As e-readers, there are obvious benefits to the iPad. Books display beautifully, in a way that is reminscent of reading in print. Books become even more portable. Imagine the difference between carrying 10 books in a backpack versus carrying one iPad. When reading, fonts can be enlarged easily. And students can read ebooks from websites via Safari's browser—so most web-based ebooks would be accessible—or ebooks specifically downloaded to the iPad in iBooks, Kindle, nook, or other free ebook apps such as Stanza. There are some books that are apps in themselves as well, like Alice Lite; some magazines such as National Geographic have beautiful magazine-like apps. And a few textbook sites such as Inkling are starting to crop up, which will enhance the use of an iPad as a virtual textbook.

### **Management and Production Concerns**

There are some definite management concerns. Though one positive is that you can manage a group of iPads from one passworded iTunes account if you prefer to keep the set of apps consistent. A negative is that iTunes does require a credit card account to be included when setting it up for apps, which can cause difficulty for some schools. However, gift cards can be used, and they could be parent-donated items. And Apple is working on education pricing for volume discounts. It recently announced its initiative for schools. More information can be found at www.apple.com/itunes/education and http://volume.itunes.apple.com. Apple is indeed beginning to recognize the struggles schools face with purchasing via its pricing structure.

Another thing noted is that an iPad is different from a laptop in terms of production. While you can purchase Apple's Keynote and Pages for the iPad and you can use notetaking tools or image editing apps, their functionality has a different feel than similar applications for a laptop. It might not be the tool of choice for intensive amounts of writing or for editing a video (not yet anyway). But like the iPhones that many of us carry around, it can quickly become the go-to device for book recommendations, maps, answers to questions via Google's apps, keeping notes and reminders, reading and highlighting ebooks, and more.

### **Implementation**

To implement this program, participating staff will be required to use personal staff development dollars to offset training and the cost of a 32GB iPad 2 and any apps purchased. The iPads will remain the property of MSA, with individual staff being personally and financially responsible for replacement if lost, damaged, or stolen.

# **Future Plans and Program Challenges**

Our greatest challenge comes from the lack of adequate legislative funding. For the 2011-2012 school year specifically, this issue was only made larger due to the shortfall in cash flow as a result of the increase in educational holdback. With double digit increases in fixed costs such as health benefits and utilities, it is becoming difficult to provide a quality education for our students. Our only revenue protection has been the addition of students to our program (of which we have a great number waiting). This has become problematic in a finite space such as ours.

MSA researched and pursued an expansion agenda for two years as a way to address revenue scarcity. To meet this challenge, during the 2009-2010 school year, MSA submitted an additional site plan approved by MDE. The 2011-2012 school year was the second year of a three year lease of the additional site within walking proximity to our current facility. Whereas this lease does allow MSA to generate additional revenue through increased enrollment, it does not address our space need after the lease runs out in 2012-2013.

During the 2010-2011 school year, the MSA Board of Directors developed a detailed 3-year strategic plan that encompasses the areas of: enrollment, budgeting, academics, facilities, and alternative funding sources. (See <a href="https://www.mnmsa.org/">https://www.mnmsa.org/</a> for a copy of the Strategic Plan.) As we closed the 2011-2012 school year, plans were put in place to build a separate facility with a gym, music room and 10 classrooms to be finished by August 2013; the end of our 3 year lease.

Other than, hopefully, getting the building completed by August 2013 and ready for the opening of school in September, we have several other goals. At the end of the school year 2011-2012, MSA lost a strong, committed leader, someone who helped found the school, taught the first couple years at the school and became the Executive Director for over 10 years. Part of our goal is to bring the community back together, and as a faculty we would become a "together we". This process started with a search and lengthy interviews involving all constituents of candidates interested in being the director at MSA. A new director started in August.

As a staff we plan to take on curriculum mapping and department presentations to our parents. One other big goal will be to implement data driven instruction as an integral part of our evaluation policy and procedures.

# **Finances**

**FY12 Audit** was conducted during July and August of 2012, and is scheduled to be completed by October 15, 2012 (the due date for this annual report is October 1, 2012). The audit results will be submitted to the commissioner and our authorizer by December 31, 2012, which is consistent with Minnesota Statute 124D.10.

**Fund Balance:** The School had another positive outcome financially for fiscal 2011-2012 as fund balance in the General Fund increased. The ending fund balance total was over one million dollars representing about 36% of expenditures incurred for the year end June 30, 2012. This is an important aspect in the MSA's financial well-being since a healthy fund balance represents things such as cashflow, as a cushion against unanticipated expenditures, enrollment declines, state aid metering changes and funding deficiencies. Additionally, it puts the school in a good place to secure bonds for the purchase of our new building.

See Appendix B for a copy of the 2011-2012 adjusted budget.

# **Authorizer Information**

As a school, MSA has been fortunate in that since our second year, we have had no significant issues that have kept MSA from renewing our 3-year contract, which has now been renewed through the 2013-2014 school year, by our new authorizer Student Achievement of Minnesota (SAM). SAM's director is Glory Kibbel, 612-723-5597, <a href="mailto:gkibbel@gmail.com">gkibbel@gmail.com</a>, P.O. Box 581639, Minneapolis, MN 55458-1639.

### **Non-Profit Status**

Attorney General - Lori Swanson

**Minnesota Attorney General's Office** 

1400 Bremer Tower - 445 Minnesota Street - St. Paul, MN 55101

Organization Name	MATH AND SCIENCE ACADEMY
Organization Type	TRUST
Contact Person	PAUL SIMONE
Address	8430 WOODBURY CROSSING
City	WOODBURY
State	MN
Zip Code	55125
IRS Code 501(c)	03
Purpose or Description	To promote effective education for students at the Math and Science Academy charter school.
Phone Number	(651) 578-7507
Status	ACTIVE

# EDITOR:

Paul Simone/Bob Kreischer
Director: Math and Science Academy
bkreischer@mnmsa.org
651-357-6920

# Appendix A

# Math and Science Academy Parent Satisfaction Survey 2011- 2012

1. What grade level did you student(s) attend during the 2011-2012 school year?

Answered Question 61 Skipped Question 0

Grade	Response Percent	<b>Response Count</b>
6 <sup>th</sup> Grade	37.7	23
7 <sup>th</sup> Grade	24.6	15
8 <sup>th</sup> Grade	23.0	14
9 <sup>th</sup> Grade	14.8	9
10 <sup>th</sup> Grade	16.4	10
11 <sup>th</sup> Grade	9.8	6
12 <sup>th</sup> Grade	6.6	4

2. How many years has your student(s) attended MSA?

Answered Question 61 Skipped Question 0

Year(s)	Response Percent	<b>Response Count</b>
1	36.1	22
2	29.5	18
3	16.4	10
4	6.6	4
5	16.4	10
6	9.8	6
7	4.9	3

3. If your student(s) is not/are not returning to MSA next year, please check the reason(s)?

Reason	Response Percent	Response Count
Graduating	36.4	4
Curriculum	18.2	2
Academic Progress	0	0
Sports	18.2	2
Other	45.5	5

4. Please respond to the following statements. Please mark TWO boxes for each statement: one for your level of agreement AND one for the level of importance.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Question is Important to Me	Question is Not Important to Me	Response Count
My student(s) feel(s) safe at MSA	77%	26%	0%	0%	0%	70%	0%	47
As a parent/guardian I feel welcome at MSA.	53	30	15	4	0	66	0	47
At MSA students at MSA show respect for each other.	49	47	6	0	0	66	0	47
I know how to access a variety of resources MSA has to offer (daily announcements, online forms, school calendar, meeting dates and times	57	43	2	0	0	62	4	47
My student is being well prepared to pursue post high school options.	47	45	6	2	0	62	2	47
MSA's curriculum is broad enough to meet the educational needs of my student(s).	39	36	11	17	0	66	0	47
I receive timely information about MSA's curriculum, policies, and school events.	38	36	11	15	2	66	0	47
The website is user friendly and contains current information about MSA. The teachers are available and accessible to my student.	40	45	11	4	2	62	4	47
The teachers respond promptly to my email inquiries.	53	28	17	4	0	68	0	47
The teachers respond promptly to my telephone inquiries.	55	21	21	4	0	70	0	47
The teachers at MSA demonstrate genuine concern for the well being of my student.	43	36	17	6	0	62	2	47
The teachers at MSA are sensitive to issues of diversity (race, gender, religion, etc).	43	23	32	2	0	55	9	47
The MSA director is available and accessible to my student.	26	32	38	4	0	51	11	47
The MSA director responds promptly to my email inquiries.	36	26	34	4	0	57	6	47

Question 4 (Continu	ied)							
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Question is Important to Me	Question is Not Important to Me	Response Count
The MSA director responds promptly to my telephone inquiries.	32	23	43	2	0	53	9	47
The MSA director demonstrates genuine concern for the well being of my student.	39	19	38	4	0	4	2	47
The MSA director is sensitive to issues of diversity (race, gender, religion, etc).	34	21	43	2	0	55	9	47
The MSA Academic director is available and accessible to my student.	34	19	43	4	0	60	6	47
The MSA Academic director responds promptly to my email inquiries.	34	17	47	4	0	60	4	47
The MSA Academic director responds promptly to my telephone inquiries.	32	15	49	2	0	55	6	47
I like the idea of spring parent teacher conferences	51	21	19	11	0	43	23	47

5. Please rate the Math class(es) that your student(s) took this year. Mark all that apply.

Answered Question 46 Skipped Question 15

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	N/A	Rating Average	Response Count
Pre-Algebra	38%	19%	6%	3%	0%	34%	1.62	32
Algebra I	22	30	7	0	7	33	2.11	27
Algebra II	4	13	4	9	4	65	2.88	23
Algebra III	5	0	10	0	5	80	3.00	20
Geometry (Elective)	0	0	0	5	5	90	4.50	19
Pre-Calculus	5	14	0	0	5	76	2.40	21
Calculus	0	6	0	0	6	89	3.50	18
AP Calculus	5	0	0	0	6	89	3.00	18

6. Please rate the Science class(es) that your student(s) took this year. Mark all that apply.

	Very				Very		Rating	Response
	Satisfied	Satisfied	Neutral	Unsatisfied	Unsatisfied	N/A	Average	Count
Life Science 6	56%	6%	6%	6%	0%	27%	1.48	34
7 Earth Science	25	25	8	0	0	42	1.71	24
8 Physical Science	30	13	0	4	0	52	1.55	23
9 Biology	11	5	5	5	0	74	2.20	19

Question 6 (Continued)										
	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	N/A	Rating Average	Response Count		
Chemistry	0	0	0	0	12	88	5.00	17		
AP Chemistry	6	6	6	0	0	82	2.00	17		
CIS Physics	0	0	0	0	6	94	5.00	16		
AP Physics	6	0	6	0	0	88	2.00	16		

7. Please rate the English class(es) that your student(s) took this year. Mark all that apply.

Answered Question 46 Skipped Question 15

	17	I	I	1	Very		D-4:	D
	Very Satisfied	Satisfied	Neutral	Unsatisfied	Unsatisfied	N/A	Rating Average	Response Count
6 English	36%	21%	9%	0%	6%	27%	1.88	33
7 English	30	17	4	0	4	43	1.77	23
8 English	27	14	9	0	5	46	1.92	22
9 English	16	16	0	0	0	68	1.50	19
10 American Literature	6	17	6	0	0	72	2.00	18
Expository Writing	7	0	0	0	0	93	1.00	14
World Literature	0	13	0	6	6	75	3.25	16
Honors World Literature	0	0	0	0	0	100	0	12

8. Please rate the Social Studies class(es) that your student(s) took this year. Mark all that apply.

Answered Question 46 Skipped Question 15

		1	1	1	X7		·	-
	Very	a			Very Unsatisfied		Rating	Response
	Satisfied	Satisfied	Neutral	Unsatisfied	Unsatisfied	N/A	Average	Count
6 Social	27%	24%	3%	12%	6%	27%	2.25	33
7 Geography	26	26	4	0	0	43	1.62	23
8 Social	23	23	9	0	0	46	1.75	22
9 World History I	21	11	0	0	0	68	1.33	19
10 World History II	18	6	0	0	0	77	1.25	17
American History	0	14	0	0	0	89	2.00	14
Honors American History	8	0	0	0	0	92	1.00	13
Political Science	7	14	0	0	0	79	1.67	14
Economics	7	7	0	0	0	86	1.50	14

9. Please rate the Spanish class(es) that your student(s) took this year. Mark all that apply.

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	N/A	Rating Average	Response Count
6 Spanish	30%	30%	3%	6%	3%	27%	1.92	33

Question 9 (Continued)								
	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	N/A	Rating Average	Response Count
7.0		_		4	0			
7 Spanish	30	9	13	4	0	44	1.85	23
8 Spanish I	17	22	9	0	0	52	1.82	23
9 Spanish II	17	17	0	0	0	67	1.50	18
10 Spanish III	0	22	0	6	0	72	2.40	18
11 Spanish IV	7	0	0	0	0	93	1.00	15

10. Please rate the Art class(es) that your student(s) took this year. Mark all that apply.

Answered Question 42 Skipped Question 19

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	N/A	Rating Average	Response Count
6 Art	22%	22%	9%	0%	0%	47%	1.76	32
7 Art	23	27	5	0	0	46	1.67	22
8 Art	15	0	15	0	0	70	2.00	20
10 Art	11	6	6	0	0	78	1.75	18

11. Please rate the Music class(es) that your student(s) took this year. Mark all that apply.

Answered Question 41 Skipped Question 20

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	N/A	Rating Average	Response Count
6 Band	13%	23%	7%	3%	0	53%	2.00	30
7-8 Band	19	7	7	4	0	63	1.90	27
9-12 Band	10	14	0	5	0	71	2.00	21

12. Please rate the Physical Ed. class(es) that your student(s) took this year. Mark all that apply.

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	N/A	Rating Average	Response Count
6 Phy. Ed.	12%	33%	15%	12%	0%	27%	2.38	33
7 Phy. Ed.	17	26	9	0	4	43	2.08	23
8 Phy. Ed.	10	19	19	0	0	52	2.20	21
9-12 Phy. Ed.	10	19	19	0	0	52	2.20	21

13. Please rate the Health. class(es) that your student(s) took this year. Mark all that apply.

Answered Question 30 Skipped Question 31

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	N/A	Rating Average	Response Count
7 Health	19%	15%	4%	4%	0%	59%	1.82	27
10 Health	5	9	5	0	5	77	2.60	22

14. Please rate the other class(es) that your student(s) took this year. Mark all that apply.

Answered Question 41 Skipped Question 20

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	N/A	Rating Average	Response Count
Globalization	13%	26%	9%	4%	4%	44%	2.31	23
Drumming	16	16	12	4	0	52	2.08	25
Family & Consumer Science	14	24	5	0	0	57	1.78	21
Cosmos & Astronomy	11	6	0	6	0	78	2.00	18
Flight	11	17	0	0	0	72	1.60	18
Speech	13	0	0	0	0	88	1.00	16
Science Fiction Literature	0	0	6	6	0	88	3.50	17
Short Stories	0	0	6	0	0	94	3.00	16
Environmental Studies	6	12	6	0	0	77	2.00	17
Electricity	0	7	0	0	0	93	2.00	15
Mental Math	9	5	5	14	9	59	3.22	22
Financial Math	6	0	6	6	0	81	2.67	16
Engineering	5	24	0	0	6	71	1.83	21
Electronics	0	6	0	0	0	94	2.00	16
Drama Study	17	11	0	0	0	72	1.40	18

15. Fill in the blank with selecting a level of satisfaction.

	Very				Very	Rating	Response
	Satisfied	Satisfied	Neutral	Unsatisfied	Unsatisfied	Average	Count
I am with the amount of PSEO	24%	27%	42%	3%	3%	2.33	33
information provided by MSA.							
I am with the timeliness of	18	24	52	3	3	2.48	33
PSEO information from MSA.							
I am with my access to PSEO	18	30	46	3	3	2.42	33
information.							
I am with how PSEO fits into	6	22	63	6	3	2.78	32
my student's MSA schedule.							
I am with the amount of CIS	10	16	65	3	7	2.81	31
information provided by MSA.							
I am with the timeliness of CIS	7	19	68	3	3	2.77	31
information from MSA.							

Question 15 (Continued)							
	Very				Very	Rating	Response
	Satisfied	Satisfied	Neutral	Unsatisfied	Unsatisfied	Average	Count
I am with my access to CIS	10	13	68	7	3	2.81	31
information.							
I am with how CIS classes fit	3	13	68	10	7	3.03	31
into my student's MSA schedule.							
I am with the amount of AP	9	13	63	13	3	2.88	32
information provided by MSA.							
I am with the timeliness of AP	13	13	63	9	3	2.78	32
information from MSA.							
I am with my access to AP	9	6	69	13	3	2.94	32
information.							
I am with how AP classes fit	13	6	66	13	3	2.88	32
into my student's MSA schedule.							

16. In general, what was your level of satisfaction with the extracurricular activities that your student participated in this year?

Answered Question 45 Skipped Question 16

	Response Percent	Response Count
Very Satisfied	38%	17
Satisfied	38	17
Neutral	22	10
Unsatisfied	0	0
Very Unsatisfied	2	1

17. Please answer yes, no, or not sure.

	Yes	No	Not Sure	Response Count
	168	INO	Not Sufe	Count
Were the questions and response options on the	100%	0%	0%	46
survey clear?				
Were the questions adequate to allow you to express your satisfaction/dissatisfaction with the	74	20	6	46
overall program at MSA?				

# Appendix B

The Working Budget estimates shown on this report are prepared using both the school's estimates and consultant estimates and are prepared for internal use only. This report has not been compiled, reviewed or audited and should not be relied upon for other uses

# **Math and Science Academy**

Statement of Revenues and Expenditures As of June 30, 2012

# **General Fund - 01**

### Revenues

State Revenues	
General Education Aid	2,306,853
Prior Year Over/Under Accruals	
Charter School Lease Aid	526,992
Special Education Aid	204,169
Endowment Aid	4,464
Other MN Aid	1,750
Total State Revenues	3,044,228
Federal Revenues	
Federal Education Job Funds	6,583
Special Education Aid	43,540
Total Federal Revenues	50,123
Local Revenues	
Fees from Patrons	10,000
Fees from Students (Field Trip and Music)	26,000
Interest Earnings	450
Technology Donations	27,443
Donations and Misc. Grants	8,500
Miscellaneous Revenues	128
Year Book Revenues	10,500
Sale of Equipment	<u> 10,000</u>
Total Local Revenues	83,021
<b>Total Revenues</b>	3,177,371
	======

# Appendix B (Continue) Statement of Revenues and Expenditures

Expenditures	
Salaries and Wages	1,167,434
Employee Benefits	503,723
Extracurriculars	41,145
Contracted Services	170,023
Communication Services	26,810
Postage	4,500
Utilities	48,230
Property and Liability Insurance	15,615
Repairs and Maintenance	65,120
Transportation for Field Trips	6,500
Staff Training (\$11,500 moved to	
Technology Budget)	8,965
Building Lease	585,546
Other Rentals and Operating Leases	10,000
Payments to Other ISD's – CIS Program	4,495
Field Trips	11,500
General Supplies	62,901
Maintenance Supplies	6,000
Instructional Supplies	23,230
Textbooks and Workbooks	20,589
Standardized Tests	4,200
Other Equipment (Furniture)	10,500
Technology Equipment	35,000
Technology Equipment – From Staff Dev Budget	12,035
Interest Expense	5,331
Dues and Memberships, Fees	4,335
Scholarships	500
Miscellaneous Expense/Indirect Cost/Beatle Grant	2,512
State Special Ed	214,914
Federal Special Ed	43,540
Total Expenditures	3,115,194
	======
<b>General Fund Net Income</b>	62,178
	======