# SCHOOL IMPROVEMENT PLAN 2007 - 2008

Maritime and Science Technology Academy Senior High School (7161)

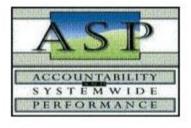
Feeder Pattern - Coral Gables Senior

Regional Center IV

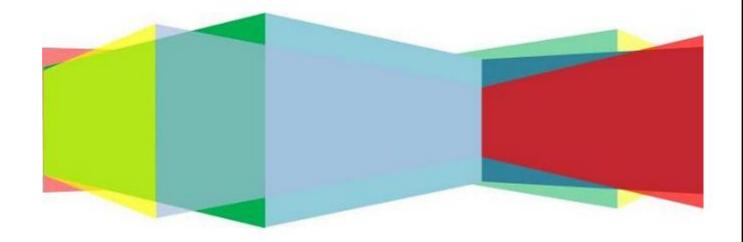
District 13 - Miami-Dade

Principal - Mr. Thomas Fisher II

Superintendent - Rudolph F. Crew, Ed.D.











### **EXECUTIVE SUMMARY**

The Maritime and Science Technology Academy (MAST), a marine-theme and science technology high school in Miami-Dade County Public Schools (M-DCPS), has 550 students in grades nine through twelve. Approximately ninety percent (90%) of the school's students are transported to and from school by a combination of Metrorail and M-DCPS school buses. As a magnet school, MAST Academy recruits its students from across Miami-Dade County.

MAST Academy's Educational Excellence School Advisory Council (EESAC) has reviewed the 2006-2007 School Improvement Plan along with the most recent data from the Florida Comprehensive Assessment Test (FCAT) in Reading, Mathematics, Science, and Writing, the Scholastic Aptitude Test (SAT), the Preliminary Scholastic Aptitude Test (PSAT), Advanced Placement (AP) assessments, the School Advisory Report, attendance reports for 2006-2007, and professional development records. Accordingly, the EESAC identifies the following as whole-school priorities for 2007-2008: improved performance on the FCAT in Reading, Mathematics, Science and Writing; increased parent involvement; additional technology venues; expanded safety and security measures; and improved performance on tests of physical fitness.

Given instruction using the Sunshine State Standards, students will maintain or improve their FCAT Reading performance as evidenced by at least 90% of students scoring at Achievement Level 3 or higher on the 2008 FCAT Reading administration.

Given instruction using the Sunshine State Standards, students will maintain or improve the existing high standard in the FCAT mathematics performance as evidenced by 100% of students scoring at FCAT Achievement Level 3 or higher on the 2008 FCAT Mathematics administration.

Given instruction in the Sunshine State Standards, students tested will maintain or improve their performance in the 2008 FCAT Writing + test component as evidenced by the number of students scoring 4.0 or above.

Given instruction using the Sunshine State Standards, students will maintain or increase scientific thinking skills as evidenced by 82% of students scoring at Achievement Level 3 or higher on the 2007 FCAT Science Assessment.

Given a school-wide emphasis on parent involvement and communication with parents, there will be a eighteen percentage point increase in participation in Parent Academy sponsored events among the parents in 2007–2008 as evidenced by Parent Academy registration and attendance logs.

Given a school-wide emphasis on discipline and safety, there will be an increase of 3% in students indicating they feel safe at school as evidenced by the 2007-2008 school climate survey.

Given instruction in the Sunshine State Standards, 95% of the students in ninth and tenth grade will access web-based FCAT preparation products as evidenced by user-frequency data.

Given instruction using the Sunshine State Standards, there will be a two percentage point increase in the 2007-2008 performance results on the Miami-Dade County Public Schools Physical Fitness Test at the Gold and Silver achievement levels as evidenced by the M-DCPS Physical Fitness Test Summary Report.

Given instruction in the Sunshine State Standards, 75% of the students in Computer Graphics will exhibit digital art work in the school's online gallery as evidenced by gradebook data and online curator logs.

Given present levels of expenditure, MAST Academy will increase two percent on th percent of Highest Return on Investment as measured by the Florida Department of Education.

Given instruction in the Sunshine State Standards, MAST Academy will maintain a 100% graduation rate as evidenced by the end of the year student withdrawal code (W06) for the graduating class.

The Organizational Performance Improvement Snapshot Assessment Survey results indicate a great deal of customer satisfaction, with no component earning an average score of less than 4.2. MAST Academy will address the two lowest scoring items (both of which fall in the category of Performance or Business Results). Teachers and staff would like to see the school do a better job of removing obstacles to progress. They would also appreciate more information on the school's financial situation. Both of these areas will be addressed during faculty meetings and on Early Release days. Reviews of school budget can also be accomplished during Curriculum Council meetings. Informal conversations with teachers suggest that the issue of the School's Performance in "removing obstacles to progress" might effectively be addressed by more thoroughly apprising professional staff of district and region requirements and mandates





# MIAMI-DADE COUNTY PUBLIC SCHOOLS

#### VISION

We are committed to provide educational excellence for all.

### MISSION

We provide the highest quality education so that all of our students are empowered to lead productive and fulfilling lives as lifelong learners and responsible citizens.

### CORE VALUES

Excellence

We pursue the highest standards in academic achievement and organizational performance.

#### Integrity

We build positive relationships through honesty, respect and compassion, which enhance the selfesteem, safety, and well-being of our students, families and staff.

Equity

We foster an environment that serves all students and aspires to eliminate the achievement gap.

#### Citizenship

We honor the diversity of our community by working as a team to ensure the educational success of all of our students and recognize that our obligations go beyond our professional responsibilities to promote democratic principles.

### 7161 - MARITIME & SCIENCE TECHNOLOGY ACADEMY SENIOR HIGH SCHOOL

### VISION

The stakeholders' vision for MAST Academy is that the school become a nationally recognized leader in college preparatory and marine-related career education. To accomplish these ambitious goals, teachers, staff, parents, and community partners must prepare students to work in proximity to scientists, corporate leaders, and marine industry professionals, conduct original ocean-going research, present papers at national and international conferences, demonstrate unwaveringly the values of honor and integrity, and enter the best colleges and universities in the world.

### **MISSION**

MAST Academy provides a marine setting and nurturing environment for studies leading to academic success, career preparation, an appreciation of the sea, and environmental awareness. Stakeholders work together to instill a commitment to life-long learning and to advance and improve a challenging curriculum integrated with the sciences and technology.

### **CORE VALUES**





- Curriculum, instructional practices, and assessments must incorporate a variety of learning activities and opportunities to enable students to achieve academic success.
  - Individual student performance is increased when students are actively involved in the learning process, presented with a challenging curriculum, and provided with a variety of instructional approaches.
    - A safe, attractive, comfortable, and clean environment promotes student learning.
- Students should be encouraged to be members of an academic family that sets high standards for everyone.
- Stakeholders share the responsibility for advancing the school's mission and nurturing intellectual freedom.

• A small focused center where stakeholders truly care about each other is the MAST model.





## **School Demograhics**

The Maritime and Science Technology Academy (MAST) is a district-wide magnet school (School of Choice) offering a marine-themed and science technology curriculum. MAST Academy serves 550 students in grades nine through twelve and grew out of the success of the Inner City Marine Project, a 1980's marine-theme enrichment program offering exposure to maritime careers and non-traditional science instruction to minority students. MAST Academy's location supports the maritime, scientific, and hospitality dimensions of its mission. MAST Academy's three buildings sit on 11.2 acres on the picturesque island of Virginia Key, 3 miles east of mainland Miami. The two main buildings were once home to the Planet Ocean Museum. MAST opened its doors in 1991 to 248 ninth and tenth graders. In 1992-1993, MAST added an eleventh grade, and in 1993-1994 graduated its first senior class. The student to teacher ratio at MAST is 1:23. Approximately 90% of the school's students are transported to and from school by a combination of Metrorail and M-DCPS school buses. The ethnic/racial makeup of the student population is 18% Black, 48% Hispanic, 25% White, and 9% Other. The percentage of students receiving free or reduced lunch has remained relatively constant the last five years at 29%. The percentage of students who qualify for gifted services is 48% and less than 1% qualify for special education services. While MAST Academy's location is an attractive match of site and mission, it is MAST's program that draws students from all over Miami-Dade County. Features unique to MAST include a college-like master schedule, curriculum majors in the areas of Marine Studies and Culture, Oceanic and Atmospheric Science Technology and Maritime Related Industries, a 29 credit requirement for graduation (five above the District level), four years of science and mathematics, and dual enrollment courses with local universities and colleges. MAST Academy is the only high school in the country that offers the United States Coast Guard JROTC program. All of the instructional staff at MAST Academy is certified and qualified. Approximately 68% of the instructional staff possess a Master's degree or higher. Additionally, 10% of the instructional staff possesses National Board certification. The ethnic/racial makeup of the instructional staff is 56% White, 15% Black, and 28% Hispanic. Through innovative programs, an exemplary instructional staff, community partner and parent involvement, leadership opportunities, and shared-decision making, MAST Academy will continue to shape students into an extraordinary community of lifelong learners.

MAST Academy presents students with a range of extended learning opportunities, including comprehensive tutorial assistance, FCAT preparation sessions before and after school and on Saturdays, and field trips to support instruction. The culmination of the academic program at MAST Academy is the senior-year internship which enables students to determine an area of career interest even before they enter college. Through Professional Growth Teams and informal return-novice teacher relationships, teacher mentoring is on-going at MAST Academy. This school offers sixteen Advanced Placement courses. In converting all ninth grade English courses to honors courses, we have taken a major step in preparing an even larger student population for the rigors of AP-level and dual enrollment instruction. The web-based tool AP Potential enabled us to identify an expanded population for Advanced Placement courses in 2007-2008. For the second year in a row, MAST Academy earned a place in Newsweek's list of the top 100 high schools in the United States on the strength and size of its Advanced Placement program. School improvement at MAST Academy incorporates the Southern Association of Colleges and Schools (SACS) standards relative to instructional and organizational effectiveness and results for student learning.





### School Foundation

#### Leadership:

Earning an average score of 4.4, the categories of Leadership, Customer and Market Focus, and Measurement, Analysis and Knowledge-Management tied as the three strongest areas surveyed. Stakeholders indicate a knowledge of the school's mission and believe their supervisors have created an environment conducive to learning and work. Teachers and staff feel that they receive information about MAST Academy and that the school's values guide their professional performance. While all items in the Leadership category received an average score of 4.2 or above, the lowest scoring item deals with organizational priorities.

#### **District Strategic Planning Alignment:**

All Strategic Planning items received an average score over 4.0. The highest ranking items address the request for ideas in the planning along with the impact of plans on teachers and staff. The lowest scoring item in this area relates to solicitation of ideas from staff in school planning.

#### Stakeholder Engagement:

Survey results suggest much satisfaction in this category. Stakeholders know their client base and feel that they are encouraged to make decisions to ensure customer satisfaction. The lowest scoring item in this category (item score of 4.2) addresses requesting information on customer satisfaction.

#### Faculty & Staff:

This category received the second highest average score (4.3). Faculty and staff feel that they have a safe workplace, that they are encouraged to make changes that will improve their work, and that there is an atmosphere of concern in the total organization. The lowest scoring item deals with recognition for a job well done.

#### Data/Information/Knowledge Management:

This category received the second highest average score (4.3). Faculty and staff feel that they have a safe workplace, that they are encouraged to make changes that will improve their work, and that there is an atmosphere of concern in the total organization. The lowest scoring item deals with recognition for a job well done.

#### **Education Design:**

This is a strong category, tying with one other area for the highest average score. The highest scoring item deals with knowing how to analyze the quality of work to determine whether modifications are necessary. Staff feels that they use data in making decisions about their work. The lowest scoring items--related to getting information about organizational process--received an average score of 4.2.

#### Performance Results:

This category received an average score of 4.2. Respondents feel that the school complies with laws and regulations and that the organization as a whole has high standards and a sterling ethical base. Staff also feel a good amount of satisfaction with their jobs and are pleased with their work products. The two lowest scoring items in the survey are in this category—items 7c and 7e. Respondents feel that the school could do a better job removing obstacles to progress. In addition, they do not always know how the school is doing financially.





# Schools Graded 'C' or Below

Professional Development:

**Disaggregated Data :** 

Informal and Formal Assessments:

Alternative Instructional Delivery Methods :





# Schools Offering Primarily Grades 6 through 12

Secondary School Redesign (new State requirement, Sec. 1003.413, F.S.) :

	Different Innovative Approaches to Instruction
✓	Responsibility of Teaching Reading for Every Teacher
✓	Quality Professional Development for Teachers and Leaders
✓	Small Learning Communities (SLC)
✓	Intensive Intervention in Reading and Mathematics
✓	Course Choice Based on Student Goals / Interests / Talent
✓	Master Schedules Based on Student Needs
✓	Parental Access and Support
✓	Applied and Integrated Courses
>	Academic and Career Planning

MAST places an emphasis across the disciplines on innovative teaching. Teachers appeal to a range of learners—from those who learn by doing and thus enjoy projects to those who depend heavily in technology to meet their learning needs. Math teachers use graphing calculators and manipulatives; English teachers assign multimedia projects as supports to a strong to a strong literature-based curriculum. FCAT preparation is integrated into coursed content. (Reading, Writing, Mathematics, Science objectives)

All teachers have infused significant amounts of reading into their curriculum. (Reading, Writing, Mathematics, Science objectives)

Teachers participate in school-initiated and District-sponsored professional development—in AP course content and strategies, FCAT preparation, testing, vertical teaming, and data analysis. (Reading, Writing, Mathematics, Science objectives)

MAST is a small learning community and as such we place emphasis on the individual needs of students. (Reading, Writing, Mathematics, Science, and Electives/Special Areas)

Pull-out sessions occur throughout the year and FCAT extra help classes are available before and after school and on weekends in both reading and mathematics. (Reading, Writing, Mathematics, and Science)

Students declare a major in ninth grade and select courses to meet the requirement of that major, just as they will in college. Academic major selections are informed by student interest and ability. (Graduation goal)

MAST's master schedule includes regular, honors, Advanced Placement, and dual enrollment courses. Accelerated options exist across the curriculum. (Graduation goal)

Parents are in the building from 7:30 a.m. into the evening hours. They have an area equipped with technology and comfortable seating. The school's PTSA recently sponsored \$22,000 in scholarships. (Parental Involvement goal)

Vocational courses are offered in culinary arts, hospitality management, web design, CAD, engineering, engineering technology, maritime science (an integrated course). (Graduation goal)

Teachers functions as advisors as students begin to develop their academic and career plans. A required senior-level internship course helps students decide what they may or may not want to do after college. (Graduation goal)





# Reading Goal

#### Alignment of Objective to the Florida Department of Education and the District Strategic Plan

Florida Education Priorities

Learning and completion at all levels, including increased high school graduation and readiness for postsecondary education	Student Performance	Alignment of Standards and Resources	Educational Leadership	Workforce Education	Parental, Student, Family, Educational Institution, and Community Involvement
		Y	Y		

#### Miami-Dade County Public Schools

#### District Strategic Plan

Ensure achievement of high academic standards by all students.	Develop our students so that they are able to successfully compete in the global economy.	Actively engage family and community members to become our partners in raising and maintaining high student achievement.	Reform business practices to ensure efficiency, effectiveness and high ethical standards.	Recruit, develop and retain high- performing, diverse, and motivated faculty and staff.
▼	7	Y		

#### **Reading Statement**

All students at MAST Academy will read at a high level and develop the skills necessary to become life-long readers of information and for pleasure.

#### **Needs Assessment**

Scores on the 2007 FCAT Reading component indicate that 9% of MAST Academy's ninth graders performed at Levels 1 and 2 in reading. The content clusters with the lowest percentage of points earned were Words & Phrases and Reference & Research at 78%. The content cluster with the highest percentage of points earned was Main Idea & Author's Purpose at 88%. Additionally, 15% of the school's tenth graders performed at reading Levels 1 and 2 in 2007. The content cluster with the lowest percentage of points earned was Main Idea & Author's Purpose at 81%. The content clusters with the lowest percentage of points earned was Main Idea & Author's Purpose at 81%. The content clusters with the highest percentage of points earned were Words & Phrases and Reference & Research at 83%. While this information indicates that the majority of our students are doing well in reading, data suggests the need to continue the Intensive Reading course as a means to enhancing students' reading comprehension.

#### NCLB Subgroup Target

TOTAL	WHITE	BLACK	HISPANIC	ASIAN	NATIVE AMERICAN	F/R LUNCH	LEP	SWD





#### Measurable Objective

Given instruction using the Sunshine State Standards, students will maintain or improve their FCAT Reading performance as evidenced by at least 90% of students scoring at Achievement Level 3 or higher on the 2008 FCAT Reading administration.

STRATEGIES	PERSONS RESPONSIBLE	START DATE	END DATE	ALIGNMENT	BUDGET
Monitor implementation of Comprehensive Research-based Reading Plan.	Principal, Assistant Principal, Lead Teacher, Reading Contact	8/20/2007	6/6/2008	District-wide Literacy Plan	0
Use AP Potential to identify an expanded population for higher level courses (AP Potential is a web-based student identification program offered by the Advanced Placement program of the College Board).	Principal, Assistant Principal, Student Services Chair, Department Chairs, Lead Teacher	12/1/2007	1/31/20078	Continuous Improvement Model	0
Provide CRISS training for new teachers and untrained faculty members	Principal, Assistant Principal, Department Chairs	9/10/2007	11/2/2007	District-wide Literacy Plan	1000
Require an Intensive Reading class for all ninth and tenth grade students with scores at Levels 1 or 2 on the 2007 FCAT administration and eleventh grade students who did not pass the reading component of the 2007 FCAT.	Principal, Assistant Principal, Reading Teachers	8/20/2007	6/6/2008	District-wide Literacy Plan	0
Offer FCAT tutoring before school, after school, and on Saturday to all MAST students.	Principal, Assistant Principal, Testing Co- chairsTeachersTutors	9/10/2007	3/7/2008	District-wide Literacy Plan	5000

#### **Research-Based Programs**

McDougal Littell text books Learning Express (pending District approval) AP Potential CRISS (CReating Independence through Student-owned Strategies)

#### **Professional Development**

AP Potential Training Reading Coach District Meetings Advanced Placement teaching and learning conferences Project CRISS (CReating Independence through Student-owned Strategies)

#### **Evaluation**

2007 FCAT results in reading District Reading Interim Assessments Tutorial rosters Administrative walk through and student reading logs (CRRP) Number of students registered for Advanced Placement English and history courses for 2007-2008.





### Mathematics Goal

#### Alignment of Objective to the Florida Department of Education and the District Strategic Plan

#### Florida Education Priorities

Learning and completion at all levels, including increased high school graduation and readiness for postsecondary education	Student Performance	Alignment of Standards and Resources	Educational Leadership	Workforce Education	Parental, Student, Family, Educational Institution, and Community Involvement
		Y	Y		

#### Miami-Dade County Public Schools

#### District Strategic Plan

Ensure achievement of high academic standards by all students.	Develop our students so that they are able to successfully compete in the global economy.	Actively engage family and community members to become our partners in raising and maintaining high student achievement.	Reform business practices to ensure efficiency, effectiveness and high ethical standards.	Recruit, develop and retain high- performing, diverse, and motivated faculty and staff.
▼	7	Y		

#### Mathematics Statement

All students at MAST Academy will improve their mathematics skills in preparation for upper-level mathematics courses.

#### **Needs Assessment**

Analysis of the 2007 FCAT Mathematics data indicates that 97% of the ninth grade students scored at or above Level 3. The content cluster with the lowest percentage of points earned was Measurement at 71%. The content cluster with the highest percentage of points earned was Data Analysis at 88%. Additionally, 98% of the tenth grade students scored at or above Level 3. The content cluster with the lowest percentage of points earned was Measurement at 64%. The content cluster with the highest percentage of points earned was Algebraic Thinking at 79%. The school's effort should therefore be to move the lowest scoring students into higher performance levels and to increase the percentage of students scoring at Level 3 into higher performance levels.

#### NCLB Subgroup Target

TOTAL	WHITE	BLACK	HISPANIC	ASIAN	NATIVE AMERICAN	F/R LUNCH	LEP	SWD





### Measurable Objective

Given instruction using the Sunshine State Standards, students will maintain or improve the existing high standard in the FCAT mathematics performance as evidenced by 100% of students scoring at FCAT Achievement Level 3 or higher on the 2008 FCAT Mathematics administration.

STRATEGIES	PERSONS RESPONSIBLE	START DATE	END DATE	ALIGNMENT	BUDGET
Administer and evaluate district practice assessments.	Principal, Assistant Principal, Mathematics Teachers	8/20/2007	6/6/2008	Continuous Improvement Model	0
Use AP Potential to identify an expanded population for higher level courses (AP Potential is a web-based student identification program offered by the Advanced Placement program of the College Board).	Principal, Assistant Principal, Student Services Chair, Department Chairs, Lead Teacher	12/1/2007	1/31/2008	Continuous Improvement Model	0
Schedule in-school tutorial sessions (pull-outs) for the ninth and tenth grade students identified as having the greatest need.	Principal, Assistant Principal,Testing Co- chairs, Mathematics Department Chair	9/17/2007	2/29/2008	Continuous Improvement Model	0
Enlist the assistance of school partners whenever possible to provide tutors to ninth through twelfth grade students.	Principal, Assistant Principal, Career Specialist	8/20/2007	6/6/2008	Academic Enrichment Opportunities	0
Provide tutoring opportunities before and after school, during lunch, and during Wednesday Activities periods to ninth through twelfth grade students.	Principal, Assistant Principal, Testing Co- chairs, Teachers, Tutors	9/10/2007	3/31/2008	Academic Enrichment Opportunities	4000
Use FCAT Explorer and RiverDeep web-based programs.	Principal, Assistant Principal, Mathematics Department Chair	8/20/2007	3/31/2008	Academic Enrichment Opportunities	0

#### **Research-Based Programs**

Prentice Hall series McDougal Little series Glencoe series Holt series

#### **Professional Development**

Attend FCAT related workshops

#### Evaluation

2008 FCAT results in mathematics District Mathematics Interim Assessments Tutoring rosters and data reports





# Writing Goal

#### Alignment of Objective to the Florida Department of Education and the District Strategic Plan

Florida Education Priorities

Learning and completion at all levels, including increased high school graduation and readiness for postsecondary education	Student Performance	Alignment of Standards and Resources	Educational Leadership	Workforce Education	Parental, Student, Family, Educational Institution, and Community Involvement
		Y	>		

#### Miami-Dade County Public Schools

#### **District Strategic Plan**

Ensure achievement of high academic standards by all students.	Develop our students so that they are able to successfully compete in the global economy.	Actively engage family and community members to become our partners in raising and maintaining high student achievement.	Reform business practices to ensure efficiency, effectiveness and high ethical standards.	Recruit, develop and retain high- performing, diverse, and motivated faculty and staff.
>	>	Y		

#### Writing Statement

All students at MAST Academy will write successfully in a variety of modes.

#### Needs Assessment

Analysis of the 2007 FCAT Writing + test data indicates that 99% of the tenth grade students scored at or above Level 4.0 We will continue to focus on teaching rhetorical skills and providing practice in writing both expository and persuasive essays.

#### NCLB Subgroup Target

TOTAL	WHITE	BLACK	HISPANIC	ASIAN	NATIVE AMERICAN	F/R LUNCH	LEP	SWD





#### **Measurable Objective**

Given instruction in the Sunshine State Standards, students tested will maintain or improve their performance in the 2008 FCAT Writing + test component as evidenced by the number of students scoring 4.0 or above.

STRATEGIES	PERSONS RESPONSIBLE	START DATE	END DATE	ALIGNMENT	BUDGET
Administer District Pre-Test and Post-Test	Principal, Assistant Principal, English Teachers	8/26/2007	4/15/2008	Continuous Improvement Model	0
Provide Project CRISS training	Principal, Assistant Principal, Department Chairs	9/10/2007	11/2/2007	District-wide Literacy Plan	1000
Administer Learning Express practice tests to ninth and tenth grade students	Principal, Assistant Principal, English Teachers	9/17/2007	5/31/2008	Continuous Improvement Model	17000
Offer Advanced Placement practice sessions to Advanced Placement students in all grade levels	Principal, Assistant Principal, Advanced Placement Teachers	11/2/2007	5/2/2008	Academic Enrichment Opportunities	750
Require writing across the curriculum	Principal, Assistant Principal, Department Chairs	8/20/2007	6/6/2008	Continuous Improvement Model	0

#### **Research-Based Programs**

Prentice Hall, McDougall Littell, Holt, Reinhart, Harcourt Brace, WW Norton writing and literature series Learning Express Project CRISS

#### **Professional Development**

Project CRISS Training Advanced Placement Workshops

Evaluation

2008 FCAT Writing Plus Scores District Writing Pre-Test and Post-Test Learning Express results





### Science Goal

#### Alignment of Objective to the Florida Department of Education and the District Strategic Plan

Florida Education Priorities

Learning and completion at all levels, including increased high school graduation and readiness for postsecondary education	Student Performance	Alignment of Standards and Resources	Educational Leadership	Workforce Education	Parental, Student, Family, Educational Institution, and Community Involvement
	$\checkmark$	▶	▶		✓

#### Miami-Dade County Public Schools

#### **District Strategic Plan**

Ensure achievement of high academic standards by all students.	Develop our students so that they are able to successfully compete in the global economy.	Actively engage family and community members to become our partners in raising and maintaining high student achievement.	Reform business practices to ensure efficiency, effectiveness and high ethical standards.	Recruit, develop and retain high- performing, diverse, and motivated faculty and staff.
>	>	>		

#### **Science Statement**

All MAST Academy students will undertake a rigorous course of study in the sciences.

#### Needs Assessment

An analysis of the 2007 FCAT Science data indicates 79% of eleventh grade students scored at or above Level 3. The content cluster with the lowest percentage of points earned was Physical and Chemical at 69%. The content clusters with the highest percentage of points earned was Earth and Space Science and Life and Environmental Sciences at 75%.





### Measurable Objective

Given instruction using the Sunshine State Standards, students will maintain or increase scientific thinking skills as evidenced by 82% of students scoring at Achievement Level 3 or higher on the 2007 FCAT Science Assessment.

STRATEGIES	PERSONS RESPONSIBLE	START DATE	END DATE	ALIGNMENT	BUDGET
Schedule all ninth and tenth grade students into either Earth Space Science or Biology classes.	Principal, Assistant Principal, Student Services Chair	8/20/2007	6/6/2008	Academic Enrichment Opportunities	0
Administer practice tests for all Advanced Placement science courses.	Principal, Assistant Principal, Science Department ChairScience Teachers	11/2/2007	5/2/2008	Advanced Academics	0
Incorporate writing activities into teacher created assessments and student activities for all ninth through twelfth grade students.	School-Site Administrators, Activities Director, Testing Co-chairs, Science Department Chair	8/20/2007	6/6/2008	Continuous Improvement Model	0
Enlist the assistance of school partners whenever possible to provide tutors and supplementary activities to all ninth through twelfth grade students.	Principal, Assistant Principal, Career Specialist, Science Department Chair	8/20/2007	6/6/2008	Academic Enrichment Opportunities	0
Encourage ninth and tenth grade students to conduct independent scientific research projects which incorporate writing and laboratory activities using inquiry-based thinking skills for all science classes.	Principal, Assistant Principal, Science Department Chair, Science Fair Coordinator	8/20/2007	6/30/2008	Academic Enrichment Opportunities	0
Provide time for science teachers to share best practices and review student performance as related to the FCAT Science Assessment.	Principal, Assistant Principal, Science Department Chair	8/20/2007	2/29/2008	Continuous Improvement Model	1000

#### **Research-Based Programs**

Prentice Hall series Holt series Houghton Mifflin series Benjamin Cummings series Merrill series Glencoe series

#### **Professional Development**

Data analysis Attend science-related workshops

#### **Evaluation**

2008 FCAT Science results Percentage of students who complete four years of science study





### Parental Involvement Goal

#### Alignment of Objective to the Florida Department of Education and the District Strategic Plan

#### Florida Education Priorities

Learning and completion at all levels, including increased high school graduation and readiness for postsecondary education	Student Performance	Alignment of Standards and Resources	Educational Leadership	Workforce Education	Parental, Student, Family, Educational Institution, and Community Involvement
				$\checkmark$	✓

#### Miami-Dade County Public Schools

#### **District Strategic Plan**

Ensure achievement of high academic standards by all students.	Develop our students so that they are able to successfully compete in the global economy.	Actively engage family and community members to become our partners in raising and maintaining high student achievement.	Reform business practices to ensure efficiency, effectiveness and high ethical standards.	Recruit, develop and retain high- performing, diverse, and motivated faculty and staff.
>	>	Y		✓

#### **Parental Involvement Statement**

Increase school-wide parent/family involvement and home communications.

#### **Needs Assessment**

An analysis of the 2007 parent involvement data indicates that only seven percent of parents participated in a Parent Academy sponsored event.





#### **Measurable Objective**

Given a school-wide emphasis on parent involvement and communication with parents, there will be a eighteen percentage point increase in participation in Parent Academy sponsored events among the parents in 2007–2008 as evidenced by Parent Academy registration and attendance logs.

STRATEGIES	PERSONS RESPONSIBLE	START DATE	END DATE	ALIGNMENT	BUDGET
Conduct a parent needs survey to determine ways to improve services.	Principal, Assistant Principal, Lead Teacher, Activites Director, Athletic Director	9/10/2007	10/31/2007	Exchange Meaningful Information	0
Utilize the automated telephone calling service to inform parents of specific involvement opportunities.	Principal, Assistant Principal, Gifted Coordinator	8/250/2007	6/6/2008	Exchange Meaningful Information	0
Promote the use of the Professional Library/Parent Resource Center.	Principal, Assistant Principal, Lead Teacher, Gifted Coordinator	8/20/2007	6/6/2008	Exchange Meaningful Information	0
Prepare information packets on school services available to students for parents.	Principal, Assistant Principal, Lead Teacher, Gifted Coordinator	9/17/2007	10/1/2007	Exchange Meaningful Information	0
Conduct Parent Academy events related to each of the foci of the 2008 FCAT	Principal, Assistant Principal, Lead Teacher, Department Chairs	10/2/2007	2/29/2008	Exchange Meaningful Information	0

#### **Research-Based Programs**

Our parent involvement initiative is aligned with the National Standards for Parental Involvement and Family Involvement.

#### **Professional Development**

Parents/families will be offered information on the following:

Student performance monitoring strategies Tutorial services College preparation and college advisement services PSAT/SAT/ACT Bright Futures Study skills and time management Advanced Placement and Dual Enrollment opportunities

#### **Evaluation**

Educational Plan meeting logs Post-meeting feedback survey





# Discipline & Safety Goal

#### Alignment of Objective to the Florida Department of Education and the District Strategic Plan

#### Florida Education Priorities

Learning and completion at all levels, including increased high school graduation and readiness for postsecondary education	Student Performance	Alignment of Standards and Resources	Educational Leadership	Workforce Education	Parental, Student, Family, Educational Institution, and Community Involvement
		>	Y		

#### Miami-Dade County Public Schools

#### **District Strategic Plan**

Ensure achievement of high academic standards by all students.	Develop our students so that they are able to successfully compete in the global economy.	Actively engage family and community members to become our partners in raising and maintaining high student achievement.	Reform business practices to ensure efficiency, effectiveness and high ethical standards.	Recruit, develop and retain high- performing, diverse, and motivated faculty and staff.
			Y	

#### Discipline & Safety Statement

We strive to keep our campus a safe, clean, healthy learning environment for our students, staff, and community.

#### **Needs Assessment**

An analysis of the 2007 school climate survey data indicates that 97 percent of students felt safe at school.





### 2007 2000

#### **Measurable Objective**

Given a school-wide emphasis on discipline and safety, there will be an increase of 3% in students indicating they feel safe at school as evidenced by the 2007-2008 school climate survey.

STRATEGIES	PERSONS RESPONSIBLE	START DATE	END DATE	ALIGNMENT	BUDGET
Conduct a Safe School Symposium, which will include the following components; peer mediation, conflict resolution, school violence prevention, substance awareness, bias, prejudice, harassment and safe driving.	Principal, Assistant Principal, Activities Director,Student Services Chairperson	10/2/2007	1/31/2008	Safe and High- quality Facilities	0
Conduct random seatbelt checks as students enter and depart campus. Improve Parking Lot Safety through the installation of on-campus traffic signs.	School-Site AdministratorsActivities DirectorSADD SponsorHead CustodianZone Mechanic	8/20/07	6/6/2008	Safe and High- quality Facilities	0

#### **Research-Based Programs**

Florida Department of Education: Safe and Healthy Schools Florida Department of Education: Best Practices – Safety and Security

#### **Professional Development**

District Critical Incident Response Plan Manual District Student Services Department Safe Schools Crises Management In-service Custodial Deep Cleaning Procedures

#### Evaluation

2008 School Climate Survey results Student Activities calendar of events report school based initivies related to campus/student safety.





# Technology Goal

#### Alignment of Objective to the Florida Department of Education and the District Strategic Plan

Florida Education Priorities

Learning and completion at all levels, including increased high school graduation and readiness for postsecondary education	Student Performance	Alignment of Standards and Resources	Educational Leadership	Workforce Education	Parental, Student, Family, Educational Institution, and Community Involvement
		Y		Y	

#### Miami-Dade County Public Schools

#### **District Strategic Plan**

Ensure achiev high academic by all stuc	standards	Develop our students so that they are able to successfully compete in the global economy.	Actively engage family and community members to become our partners in raising and maintaining high student achievement.	Reform business practices to ensure efficiency, effectiveness and high ethical standards.	Recruit, develop and retain high- performing, diverse, and motivated faculty and staff.
<		Y			

#### **Technology Statement**

Equip all students with technological skills to maximize their effectiveness in high school, college, and the marketplace.

#### Needs Assessment

Technology survey results show that approximately 91% of MAST Academy students feel proficient in accessing webbased study, problem-solving, and project tools. One hundred percent of these students, however, will need to be proficient in these online skills. Web-based FCAT preparation programs Learning Express and FCAT Explorer offer a way for students to become more proficient in accessing online study tools. While 100% of students met high standards in expository writing, 1% did not meet high standards in persuasive writing. Using web-based FCAT preparation programs, we will continue to focus on teaching rhetorical skills and providing practice in writing both expository and persuasive essays.





#### **Measurable Objective**

Given instruction in the Sunshine State Standards, 95% of the students in ninth and tenth grade will access web-based FCAT preparation products as evidenced by user-frequency data.

STRATEGIES	PERSONS RESPONSIBLE	START DATE	END DATE	ALIGNMENT	BUDGET
Require writing across the curriculum in grades nine and ten.	Principal, Assistant Principal	8/20/02007	6/6/2008	Education Innovation	0
Require submission of FCAT practice essays using web- based tools.	Principal, Assistant Principal, Language Arts Teachers	9/10/2007	5/31/2008	Continuous Improvement Model	0
Require students to complete District practice tests.	Principal, Assistant Principal, Language Arts Teachers	9/17/2007	5/31/2008	Continuous Improvement Model	0
Provide additional CRISS training.	Principal, Assistant Principal, Department Chairs	9/17/2007	11/2/2007	Education Innovation	1000
Implement Advanced Placement Vertical Teaming.	Principal, Assistant Principal, Language Arts Department Chair	9/28/2007	6/6/2008	Academic Enrichment Opportunities	1000

#### **Research-Based Programs**

Learning Express

#### **Professional Development**

FCAT Explorer training Learning Express training

Evaluation

User frequency and completion data from the Learning Express. User frequency and completion data from FCAT Explorer online programs.





### Health & Physical Fitness Goal

#### Alignment of Objective to the Florida Department of Education and the District Strategic Plan

#### Florida Education Priorities

Learning and completion at all levels, including increased high school graduation and readiness for postsecondary education	Student Performance	Alignment of Standards and Resources	Educational Leadership	Workforce Education	Parental, Student, Family, Educational Institution, and Community Involvement
		>	Y		

#### Miami-Dade County Public Schools

#### **District Strategic Plan**

Ensure achievement of high academic standards by all students.	Develop our students so that they are able to successfully compete in the global economy.	Actively engage family and community members to become our partners in raising and maintaining high student achievement.	Reform business practices to ensure efficiency, effectiveness and high ethical standards.	Recruit, develop and retain high- performing, diverse, and motivated faculty and staff.
✓	Y	Y		

#### **Health & Physical Fitness Statement**

MAST students will improve their physical fitness skills and undertake healthy lifestyle activities on a regular basis.

#### Needs Assessment

An analysis of the 2006-2007 Physical Fitness Test Summary indicates that 78% of the students tested were recognized at the Gold or Silver achievement levels.





#### **Measurable Objective**

Given instruction using the Sunshine State Standards, there will be a two percentage point increase in the 2007-2008 performance results on the Miami-Dade County Public Schools Physical Fitness Test at the Gold and Silver achievement levels as evidenced by the M-DCPS Physical Fitness Test Summary Report.

STRATEGIES	PERSONS RESPONSIBLE	START DATE	END DATE	ALIGNMENT	BUDGET
Implement motivation through awareness of Gold and Silver Star recognition.	Principal, Assistant Principal, Health Teacher Physical Fitness Teachers	8/20/2007	6/6/2008	Healthcare & Healthy Choices	0
Access school's fitness trail as part of a diversified physical training plan.	Principal, Assistant Principal, Health Teacher Physical Fitness Teachers	8/20/2007	6/6/2008	Healthcare & Healthy Choices	0
Award students that improve scores on the Physical Education Test.	Principal, Assistant Principal, Health Teacher, Physical Fitness Teachers	8/20/2007	6/6/2008	Healthcare & Healthy Choices	2000
Emphasize relationships between physical fitness, health, and mental acuity through the use of Student Fitness Logs.	Principal, Assistant Principal, Health Teacher Physical, Fitness Teachers, Culinary Operations Teachers	8/20/2007	6/6/2008	Healthcare & Healthy Choices	0
Increase awareness of diet and its effect on general health through Student Fitness Logs.	Principal, Assistant Principal, Health Teacher, Physical Fitness Teachers, Culinary Operations Teachers	8/20/2007	6/6/2008	Healthcare & Healthy Choices	0

#### **Research-Based Programs**

Not applicable.

#### **Professional Development**

Training in physical fitness instructional techniques.

#### Evaluation

Evaluation will be based on the 2006-2007 report of the Miami-Dade County Public Schools Physical Fitness Test.





### Electives & Special Areas Goal

#### Alignment of Objective to the Florida Department of Education and the District Strategic Plan

#### Florida Education Priorities

Learning and completion at all levels, including increased high school graduation and readiness for postsecondary education	Student Performance	Alignment of Standards and Resources	Educational Leadership	Workforce Education	Parental, Student, Family, Educational Institution, and Community Involvement
		<b>&gt;</b>		$\checkmark$	

#### Miami-Dade County Public Schools

#### **District Strategic Plan**

ł	Ensure achievement of high academic standards by all students.	Develop our students so that they are able to successfully compete in the global economy.	Actively engage family and community members to become our partners in raising and maintaining high student achievement.	Reform business practices to ensure efficiency, effectiveness and high ethical standards.	Recruit, develop and retain high- performing, diverse, and motivated faculty and staff.
	▼	>	>		✓

#### **Electives & Special Areas Statement**

All MAST Academy students will create digital portfolios.

#### Needs Assessment

All students in Computer Graphics classes produce digital art products, but in 2005-2006, only 66% of the students enrolled in the course posted their work to the school website in the online gallery space. The gallery must also be expanded and redesigned to accommodate gallery notes that contextualize online images and products.





#### **Measurable Objective**

Given instruction in the Sunshine State Standards, 75% of the students in Computer Graphics will exhibit digital art work in the school's online gallery as evidenced by gradebook data and online curator logs.

STRATEGIES	PERSONS RESPONSIBLE	START DATE	END DATE	ALIGNMENT	BUDGET
Announce launch of gallery site to families and school partners.	Principal, Assistant Principal, Art Teacher, Webmaster	10/1/2007	5/31/2008	Education Innovation	0
Create cross-disciplinary activity for AP Art History and Computer Graphics students to conduct joint study of art classics.	Principal, Assistant Principal, Art Teacher, Webmaster	10/1/2007	15/31/2008	Education Innovation	0
Train teacher in online posting techniques and criteria for online gallery exhibits.	Principal, Assistant Principal, Art Teacher, Webmaster	9/24/2007	11/30/2007	Education Innovation	0
Require Computer Graphics students to generate gallery notes for all online postings.	Principal, Assistant Principal, Art Teacher, Webmaster	10/1/2007	4/30/2008	Education Innovation	0
Require Computer Graphics students to create and maintain digital portfolios.	Principal, Assistant Principal, Art Teacher, Webmaster	10/1/2007	4/30/2008	Education Innovation	0

#### **Research-Based Programs**

Not applicable.

**Professional Development** 

Technology training

Evaluation

Gradebook data Online curator logs





### Return On Investment Goal

#### Alignment of Objective to the Florida Department of Education and the District Strategic Plan

#### Florida Education Priorities

Learning and completion at all levels, including increased high school graduation and readiness for postsecondary education	Student Performance	Alignment of Standards and Resources	Educational Leadership	Workforce Education	Parental, Student, Family, Educational Institution, and Community Involvement
	N	V	V	V	

#### Miami-Dade County Public Schools

#### **District Strategic Plan**

high acad	achievement of demic standards all students.	Develop our students so that they are able to successfully compete in the global economy.	Actively engage family and community members to become our partners in raising and maintaining high student achievement.	Reform business practices to ensure efficiency, effectiveness and high ethical standards.	Recruit, develop and retain high- performing, diverse, and motivated faculty and staff.
	<b>&gt;</b>	Y	Y	Y	✓

#### **Return On Investment Statement**

MAST Academy will improve percentage of highest return on investment value as measures by the Florida Department of Education.

#### **Needs Assessment**

Based on most current data avaiulable from teh Florida Department of Education, MAST Academy ranks in the 10th percentile on Return on Investment and 46 percent of the Highest Return on Investment.





### Measurable Objective

Given present levels of expenditure, MAST Academy will increase two percent on th percent of Highest Return on Investment as measured by the Florida Department of Education.

STRATEGIES	PERSONS RESPONSIBLE	START DATE	END DATE	ALIGNMENT	BUDGET
Require submission of FCAT practice essays using web- based tools.	Principal, Assistant Principal, Language Arts Teachers	9/24/2007	5/31/2008	Continuous Improvement Model	0
Require students to complete District practice tests.	Principal, Assistant Principal, Language Arts Teachers	8/24/2007	4/15/2008	Continuous Improvement Model	0
Require writing across the curriculum in grades nine and ten.	Principla, Assistant Principal	8/20/2007	6/6/2008	Continuous Improvement Model	0
Implement Advanced Placement Vertical Teaming.	Principal, Assistant Principal, Language Arts Department Chair	10/1/2007	5/31/2008	Advanced Academics	1000
Provide additional CRISS training.	Principal, Assistant Principal, Department Chairs	9/10/2007	11/202007	Academic Enrichment Opportunities	1000

#### **Research-Based Programs**

Prentice Hall, McDougall Litell, Holt, Reinhart, Harcourt Brace Learning Express Project CRISS

#### **Professional Development**

Learning Express Training Zelda Glazer Writing Institute CRISS Training

Evaluation

Learning Express results User frequency data





# Graduation (High Schools Only) Goal

#### Alignment of Objective to the Florida Department of Education and the District Strategic Plan

#### Florida Education Priorities

Learning and completion at all levels, including increased high school graduation and readiness for postsecondary education	Student Performance	Alignment of Standards and Resources	Educational Leadership	Workforce Education	Parental, Student, Family, Educational Institution, and Community Involvement
				$\checkmark$	✓

#### Miami-Dade County Public Schools

#### **District Strategic Plan**

Ensure achievement of high academic standards by all students.	Develop our students so that they are able to successfully compete in the global economy.	Actively engage family and community members to become our partners in raising and maintaining high student achievement.	Reform business practices to ensure efficiency, effectiveness and high ethical standards.	Recruit, develop and retain high- performing, diverse, and motivated faculty and staff.
Y	>	Y	Y	✓

#### **Graduation (High Schools Only) Statement**

To maintain a 100% graduation rate at the MAST Academy.

#### Needs Assessment

MAST Academy will maintain the historical pattern of all seniors having passed the FCAT before the completion of their eleventh grade school year.





#### Measurable Objective

Given instruction in the Sunshine State Standards, MAST Academy will maintain a 100% graduation rate as evidenced by the end of the year student withdrawal code (W06) for the graduating class.

STRATEGIES	PERSONS RESPONSIBLE	START DATE	END DATE	ALIGNMENT	BUDGET
Require completion of an annual internship or ethics and leadership class before graduation.	Principal, Assistant Principal, Guidance Counselors, Outreach Coordinator	8/20/2007	6/6/2008	Education Innovation	0
Review student progress towards completion of an academic major and conduct bi-annual review of student history.	Principal, Assistant Principal, Guidance Counselors	10/1/067	2/26/2008	Education Innovation	0
Conduct individual and group consultation for post-secondary college plans: College Night, College Visits, and Financial Aid Workshop	Principal, Assistant Principal, Career Counselor, CAP Advisor, and PTSA	9/10/2007	5/31/2008	Exchange Meaningful Information	0
Coordinate annual Florida Bright Futures registration and eligibility evaluation.	Principal, Assistant Principal, CAP Advisor, Guidance Counselors	1/7/2008	5/31/2008	Exchange Meaningful Information	0
Continue the comprehensive subject area tutorial program.	School-Site Administrators, Teachers, University of Miami Tutors	9/10/2007	5/31/2008	Academic Enrichment Opportunities	4000
Conduct outreach activities including: Back-to-School Night, Academic Symposium, Captain's Calls (monthly class meetings with Principal and Student Services representatives).	Principal, Assistant Principal, Guidance Counselors	9/10/2007	5/31/2008	Exchange Meaningful Information	1000

#### **Research-Based Programs**

Not applicable

#### **Professional Development**

College Board training programs for guidance counselors ACT / SAT State University System Annual Workshop Annual Melissa Institute Against Violence Workshop Student Services updates and training institute College Assistance Program monthly meetings, financial aid workshop, college admission process, and college fair

#### Evaluation

Adequate Yearly Progress Report (FCAT passing rate) Internship completion 90% completion of an academic major 100% graduation rate with student withdrawal code of W06 via ITS data





# Other Goal

#### Alignment of Objective to the Florida Department of Education and the District Strategic Plan

Florida Education Priorities

Learning and completion at all levels, including increased high school graduation and readiness for postsecondary education	Student Performance	Alignment of Standards and Resources	Educational Leadership	Workforce Education	Parental, Student, Family, Educational Institution, and Community Involvement

#### Miami-Dade County Public Schools

#### **District Strategic Plan**

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#### **Other Statement**

**Needs Assessment** 





### Measurable Objective

1						
	STRATEGIES	PERSONS	START	END DATE	ALIGNMENT	BUDGET
		RESPONSIBLE	DATE		-	
		RESPONSIBLE	DATE			

**Research-Based Programs** 

**Professional Development** 

Evaluation





### EESAC Compliance

YES	NO	
¥		The majority of the Board of Directors/EESAC members are not employed by the school. The Board of Directors SAC is composed of the principal, and an appropriately balanced number of teachers, education support employees, students (for middle, junior high and high school only), parents, and other business and community citizens who are representative of the ethnic, racial, and economic community served by the school.

#### Budget:

EESAC members participate in year round budget discussions.

#### Training:

EESAC reviewed teacher and staff training needs relative to the 2007-2008 SIP.

#### Instructional Materials:

EESAC reviewed and discussed the instructional materials specified in the 2007-2008 SIP at the September 11, 2007 meeting.

#### Technology:

EESAC members participate in year round technology discussions. Technology targets in the 2007-2008 SIP were reviewed at the September 11, 2007 meeting.

#### Staffing:

EESAC reviewed and discussed the staffing needs at the September 11, 2007 meeting.

#### **Student Support Services:**

EESAC received input from the Guidance Department.

#### Other Matters of Resource Allocation:

EESAC members addressed the allocation of resources at the September 11, 2007 EESAC meeting.

#### Benchmarking:

EESAC members reviewed benchmark data at the September 11, 2007 meeting.

#### School Safety & Discipline:

EESAC reviewed the school safety objective at the September 11, 2007 meeting.





# Budget Summary

BY GOAL	TOTAL BUDGET
Reading	6000
Mathematics	4000
Writing	18750
Science	1000
Parental Involvement	0
Discipline & Safety	0
Technology	2000
Health & Physical Fitness	2000
Electives & Special Areas	0
Return On Investment	2000
Graduation (High Schools Only)	5000
Total	40750





Date of Review:

This School Improvement Plan has been reviewed cooperatively by administrators, teachers, parents, students, and business/community representatives. As a result of this review, modifications to the SIP will be made in the following areas

The original signature page, including signatures of all persons listed below, is on file at the Region Office.

Required Signatures:

Principal

EESAC Chair

UTD Steward

EESAC Parent Representative

EESAC Business/Community Representative

EESAC Student Representative, as applicable

Additionally, the signature of the Region Superintendent/District Administrator certifies that this plan has been reviewed by appropriate personnel to ensure compliance with state and district rules.

**Region Superintendent**