Office of School Board Members
Board Meeting of April 16, 2008

April 11, 2008

Dr. Wilbert "Tee" Holloway, Board Member

SUBJECT: **REQUEST FOR APPROVAL OF RESOLUTION NO. 08-51 OF THE SCHOOL BOARD OF MIAMI-DADE COUNTY, FLORIDA, RECOGNIZING MIAMI SCIENCE MUSEUM FOR EXCELLENCE AND COMMITMENT TO MINORITY REPRESENTATION IN SCIENCE, ENGINEERING, AND TECHNOLOGY** Added

COMMITTEE: **INSTRUCTIONAL EXCELLENCE AND COMMUNITY ENGAGEMENT**

LINK TO DISTRICT STRATEGIC PLAN: **ENSURE ACIEVEMENT OF HIGH ACADEMIC STANDARDS BY ALL STUDENTS**

According to the US Department of Labor (USDOL), employment in scientific and technical careers is expected to grow by 27.8 percentile by 2012, representing an additional 1.9 million new jobs (USDOL, 2003). Studies show that if women and other minorities were represented in the science, engineering, and technology (SET) workforce in proportion to their representation in the U.S. population, there would be no shortage; however, women, Hispanics, and African Americans continue to be underrepresented both in the SET work force and in the educational programs leading to SET-related careers. Recent reports show that while women account for 50.6% of Bachelor's degrees in any SET field, they account for only 27% of computer science degrees and 20% of engineering degrees. Among minority women, the figures are even lower, with African American and Hispanic women together accounting for only 6.4% of all computer science Bachelor's degrees, and only 3.4% of all engineering Bachelor's degrees (NSF, 2004).

For the past decade, the Miami Science Museum (Museum) has secured funding to effectively implement several programs that encourage middle and senior high school girls to participate in and pursue studies in the SET fields. In 1998, the Museum received a grant from the National Science Foundation (NSF) for a three-year collaborative project involving the Museum, Miami -Dade County Public Schools and SECME, Inc. The project involved middle school girls, two teachers from each school, parents/guardians, female engineers, and staff from the museum, the school system, the National SECME office in Atlanta, Georgia, Florida International University, and the University of Miami to provide services to the girls. The project was entitled SECME RISE (Raising Interest in Science and Engineering) and immersed female students in technology and engineering projects that increased their confidence in entering traditionally male dominated science and engineering fields. The project served approximately 130 middle school girls and introduced RISE strategies to all 52 MDCPS middle schools.

Revised
H-11

At the close of the SECME RISE project, the Museum submitted a subsequent grant and was again funded by NSF for the GREAT (Girls Redesigning and Excelling in Advanced Technology) project: 2001 – 2004. This time, the program goal was more focused on increasing the confidence, interest, and preparation of girls to pursue studies and careers in the field of information technology. At the project's conclusion, approximately 80 middle school girls were served.

In 2005, as an expansion of the middle school programs and the continued need for equity in science, engineering, and technology (SET), the Museum submitted and was funded for a US Department of Education/Women's Educational Equity Act (WEEA) grant for high school girls titled Raising Interest in Science and Engineering (RISE). This most recent project continues to raise awareness of, and interest in, engineering and advanced technology, but with a focus on high school girls, particularly girls of color. The expectation at the completion of this project is to increase representation of females in advanced science and technology-based classes and knowledge of SET careers. Specific objectives are:

- To extend RISE programming to SECME clubs at the lowest-performing high schools in Miami-Dade County, building girls' content knowledge, interest and motivation to pursue SET careers.
- To enhance the skills of M-DCPS high school science teachers through professional development in technology integration, gender equity strategies and development of hands-on science and engineering activities.
- To increase parental/guardian awareness and elicit their support for their daughters' SET education and related career aspirations.
- To implement a comprehensive evaluation plan and contribute to the field by examining the impact of combining formal and informal learning environments on equity-based education.
- To broadly disseminate program strategies and professional development materials.

Over the course of four years, the program will target 80 senior high school girls from four critical-need schools, along with their parents, and mathematics and science teachers.

The Miami Science Museum exemplifies a strong partnership that continues to strengthen and expand minority exposure and participation in studies that build excellence and equity for students to meet the workforce demands of the 21st Century.

ACTION PROPOSED BY
DR. WILBERT "TEE" HOLLOWAY:

That The School Board of Miami-Dade County, Florida, approve Resolution No. 08-51 Recognizing Miami Science Museum for commitment to the achievement and pursuit of excellence by minority students in the studies of science, engineering, and technology. } Added

RESOLUTION NO. 08-51
OF THE SCHOOL BOARD OF MIAMI-DADE COUNTY, FLORIDA, RECOGNIZING THE MIAMI SCIENCE MUSEUM FOR EXCELLENCE AND COMMITMENT TO MINORITY REPRESENTATION IN SCIENCE, ENGINEERING, AND TECHNOLOGY

WHEREAS, according to the U.S. Department of Labor, employment in scientific and technical careers is expected to grow by over 27 percent by 2012; and

WHEREAS, in spite of the expected increase in jobs, women, Hispanics, and African Americans continue to be underrepresented both in the science, engineering, and technology fields and in the educational programs leading to related careers in these fields; and

WHEREAS, for the past decade, the Miami Science Museum has secured funding to implement several programs that encourage middle and senior high school girls to participate in and pursue studies in the science, engineering, and technology fields; and

WHEREAS, the SECME RISE (Raising Interest in Science and Engineering) project served approximately 130 middle school girls and immersed female students in technology and engineering projects that increased their confidence in entering traditionally male dominated fields; and

WHEREAS, the GREAT (Girls Redesigning and Excelling in Advanced Technology) project served approximately 80 middle school girls and focused on increasing the confidence, interest, and preparation of girls to pursue studies and careers in the fields of information technology; and

WHEREAS, the Miami Science Museum's most recent project, RISE, continues to raise awareness of, and interest in, engineering and advanced technology with a focus on high school girls, particularly girls of color, and aims to increase representation of females in advanced science and technology-based classes and knowledge of science, engineering, and technology careers; and Added

WHEREAS, the Miami Science Museum exemplifies a strong partnership that continues to strengthen and expand minority exposure and participation in studies that build excellence and equity for students to meet the workforce demands of the 21st century;

NOW, THEREFORE, BE IT RESOLVED THAT:

The School Board of Miami-Dade County, Florida, approve Resolution No. 08-51 of The School Board of Miami-Dade County, Florida, recognizing the Miami Science Museum for excellence and commitment to minority representation in science, engineering, and technology.

A copy of this resolution is placed in the permanent records of this Board.

Presented this sixteenth day of April, A.D. 2008

THE SCHOOL BOARD OF MIAMI-DADE COUNTY, FLORIDA

_____
CHAIR

ATTEST:

_____
Secretary