

Magnet Schools Assistance Program (MSAP)  
Project Narrative

TABLE OF CONTENTS

**Competitive Preference Priorities**

**1 Need for Assistance** ..... 1  
    (a) Costs of fully implementing the magnet schools project ..... 4  
    (b) Resources available to carry out project if funds were not provided ..... 6  
    (c) Extent to which costs of project exceed applicant’s resources..... 8  
    (d) Difficulty of carrying plan, considering design (type of program, location) ..... 10

**4 - Promoting STEM Education** .....13

**5 – Supporting Strategies for Which There is Evidence of Promise**.....15

**Invitational Priority**

**1 – Socioeconomic Integration**.....18

**Selection Criteria**

**(a) Desegregation** .....21  
    (1) Effective plan to recruit students from different backgrounds .....21  
    (2) Foster interaction among students of different backgrounds.....25  
    (3) Ensure equal access/treatment for traditionally underrepresented .....29  
    (4) All other desegregation strategies .....32

**(b) Quality of Project Design** .....34  
    (1) Improve student academic achievement and achievement in instructional area offered by school..... 34  
    (2) Operate grant, including multi-year plan, commitment of partners; broad stakeholder support..... 80  
    (3) Professional development of sufficient quality, intensity, and duration to lead to improvements ..... 85  
    (4) Project is supported by strong theory ..... 96

**(c) Quality of Management Plan** .....100  
    (1) Achieve the objectives on time/within budget, including responsibilities, timelines, milestones .....100  
    (2) Diversity of perspectives, including parents, teachers, business, professionals, recipients, others ....113

**(d) Quality Of Personnel** .....116  
    (1) The Project Director (is qualified to manage the project ..... 116  
    (2) Other key personnel are qualified to manage the project..... 118  
    (3) Teachers are qualified to implement the special curriculum ..... 128

**(e) Quality of Project Evaluation** .....131  
    (1) Methods of evaluation examine effectiveness of project implementation strategies..... 131  
    (2) Methods include objective measures related to outcomes and produce quantitative/qualitative data ..131  
    (3) Methods provide feedback and periodic assessment of progress toward intended outcomes.....131

**Magnet Schools Assistance Program (MSAP)**  
**The School District of Palm Beach County, Florida**  
**June 1, 2016**

*Now, more than ever, education is the gateway to opportunity...*

*We must harness new ideas and technology to reform our schools and empower our citizens with the skills they need to work harder, learn more, reach higher.*

~ President Barack Obama

**COMPETITIVE PRIORITY 1 – NEED FOR ASSISTANCE (5 Points)**

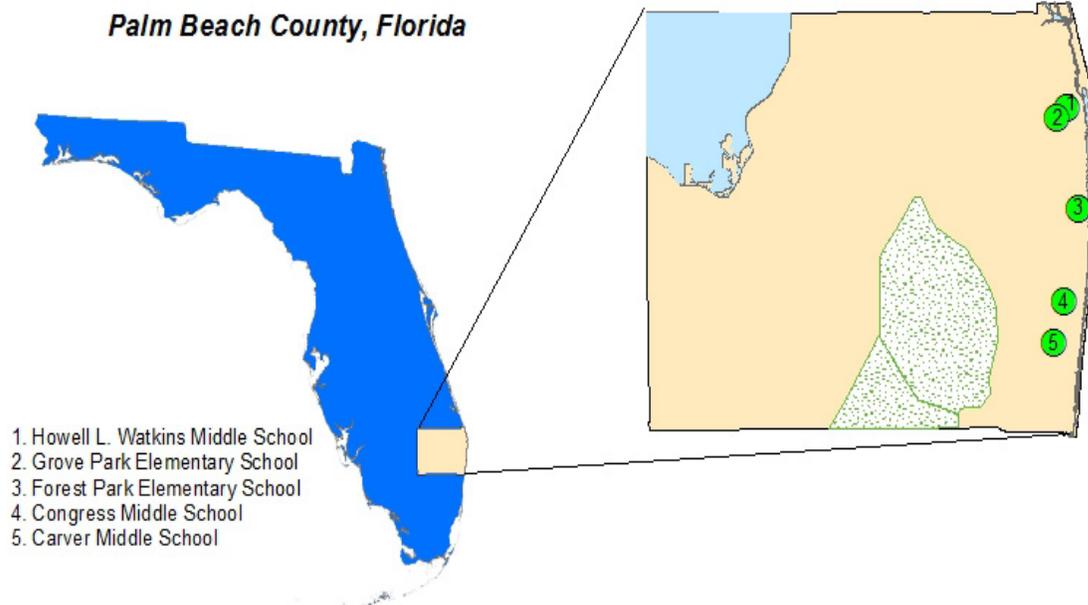
Located on Florida’s southeastern coast, Palm Beach County is one of the largest counties in the United States and is home to over 1.4 million people. Roughly the size of Delaware, the county contains 37 municipalities and spans 2,386 square miles, encompassing the city of West Palm Beach and surrounding communities, reflecting diversity in population and geography, with large, rural farming areas to the west, numerous suburban areas, and a dense, urban core.

Mirroring the county it serves, the *School District of Palm Beach County (SDPBC)* is the twelfth (12<sup>th</sup>) largest school district in the nation, providing a K-12 education to a culturally diverse population of 191,542 students in 186 public schools. Immigration and diversity are reflected in the 152 languages and dialects spoken. The SDPBC is a majority-minority school district, with a racial/ethnic composition of 34% White, 29% Black, 32% Hispanic, and 5% other. Currently, over half (55.8%) of all district students are eligible for the federal lunch program, the percentage used in this project to measure the percentage of students in low socioeconomic status (SES).

The SDPBC proposes to implement a Magnet Schools Assistance Program (MSAP) project to expand its capacity to offer students the opportunity to attend high quality magnet schools with thematic studies in their areas of interest throughout their K-12 education. The five

proposed schools and their school-wide magnet themes were selected on the basis of several criteria:

- 1) Schools with students that are minority isolated, low income, and low performing;
- 2) Facilities that are under-enrolled – the five proposed schools have an empty seat capacity to accept up to a combined total of 2,172 new students to the magnet schools;
- 3) The International Baccalaureate and STEAM Academy themes were key in that they were identified by both survey and application data as most popular among families and these themes reflect the strategic development of K-12 magnet curriculum continuity; and
- 4) The proposed schools are located in different geographical regions of the county, at great distances apart, such that they will not compete with one another for students, but they will offer expanded magnet choice throughout the county and an opportunity for students to complete their education in a K-12 magnet curriculum continuum by choice.



The schools along the coast, or locally referred to as “coastal schools,” serve over 75% of the student population in Palm Beach County. These inner city, urban schools, which experience the

most extreme instances of minority isolation, are located along the Interstate 95 (I-95) corridor of the county. A great diversity of people, cultures, and living conditions characterizes the coastal area which extends 50 miles from north to south. The SDPBC has designated five of these “coastal schools” to be in this MSAP proposal. All five currently serve neighborhood students who are largely minority-group isolated and of low socioeconomic status.

PROPOSED MAGNET SCHOOLS	# Students Enrolled	Black or African American	Hispanic	White	Other	Low SES	# Seats Available by Choice
Palmetto Elem	530	9%	81% <i>MGI</i>	8%	2%	97%	352
Grove Park Elem	641	67% <i>MGI</i>	22%	6%	5%	93%	313
HL Watkins Mid	933	70% <i>MGI</i>	15%	9	6%	88%	319
Carver Middle	850	64% <i>MGI</i>	13%	9	5%	86%	684
Congress Middle	928	61% <i>MGI</i>	24%	8	6%	87%	504
School Totals	3,882	-	-	-	-	-	2,172
District-Wide	-	29%	32%	34%	56%	56%	-

*Minority Group Isolation (MGI)* occurs at a school when the proportion of students belonging to a specific minority group is significantly greater than the District’s average percentage for that group. *The proposed schools all have an isolated minority group (Black or Hispanic) with a proportion of students that is more than twice the average District percentage for that group.*

The SDPBC Voluntary Plan is based on the belief that conversion to magnet schools through innovative thematic programming, along with aggressive and targeted recruitment, will attract a great deal of interest in these schools as a real and viable choice for nonminority students. The proposed magnet schools have a defined neighborhood zone allowing all students who live within these zones to receive priority admission to the magnet school. All five will be school-wide magnet programs, where all students are magnet students and all teachers are magnet teachers. These are all under-enrolled schools, which allows sufficient space for a large new

group of non-neighborhood students to attend the magnet schools by choice, thereby reducing the proportion of minority-isolated students and increasing socioeconomic integration.

These proposed MSAP schools will complete K-12 magnet feeder patterns with already established magnet schools, making the overall vision for SDPBC magnet schools stronger. These patterns will attract more students and create a greater sense of belonging, ownership, and appreciation for the value of diversity and academic excellence in the K-12 magnet continuum.

***THE K-12 MAGNET CURRICULUM CONTINUUM***

<b>SDPBC Region</b>	<b>School-wide Magnet Theme</b>	<b>Elementary School</b>	<b>Middle School</b>	<b>High School</b>
<b>NORTH</b>	<b>INTERNATIONAL BACCALAUREATE</b>	<i>Grove Park IBPYP 2016 MSAP</i>	<i>HL Watkins/IBMYP 2016 MSAP</i>	W.B.Dwyer HS/IBDP (Established)
<b>CENTRAL</b>	<b>INTERNATIONAL BACCALAUREATE</b>	<i>Palmetto/IBPYP 2016 MSAP</i>	Conniston IBMYP (Established)	Forest Hill HS/IBDP (Established)
<b>SOUTH/ CENTRAL</b>	<b>STEAM ACADEMY</b>	Galaxy STEAM (Established)	<i>Congress IBMYP 2016 MSAP</i>	Boynton HS/STEAM (Established)
<b>SOUTH</b>	<b>INTERNATIONAL BACCALAUREATE</b>	Morikami IBPYP (Established)	<i>Carver IBMYP 2016 MSAP</i>	Atlantic HS/IBDP (Established)

The table above illustrates the way these proposed magnet schools will build the K-12 magnet curriculum continuum, listing key magnet themes, established magnet schools that address each theme, and proposed MSAP schools (shaded and italics) that will complete the K-12 theme patterns in different regions of the county. These new schools will address minority group isolation, help fill gaps in the District’s K-12 magnet continuity across themes, provide additional academic options to students and their families, and inspire students to achieve.

***1(a) The costs of fully implementing the magnet schools project as proposed.***

This project is the product of an in-depth, comprehensive needs assessment and planning process, involving teachers, school principals, parents, curriculum specialists, District and school administrators, and community and business representatives. Over a six-month period,

this planning committee analyzed data at every level and identified the multiple gaps and persistent challenges that exist within the current school sites. They studied successful magnet themes, potential magnet feeder patterns, parent/student interest, effectiveness of theme integration on student achievement and diversity, overall support by community stakeholders. They used a systematic process for identifying discrepancies between the current conditions that define these schools and the changes required to bring about the desired conditions that will promote diversity, enhance the school climate, and generate improved student outcomes. As a result, each proposed magnet school is organized around a rigorous design for innovative learning, focusing efforts on raising achievement and promoting diversity and excellence.

The greatest cost for magnet schools is generated at the start-up. The MSAP budget will cover the start-up costs associated with the complete transformation of five high-needs, minority-isolated schools into highly successful magnet schools that are capable of attracting the voluntary enrollment of students of diverse racial and socioeconomic backgrounds by offering a school-wide thematic magnet program. The MSAP budget request of almost \$4 million per year will serve an estimated 7,000 students over the three-year start-up period, approximately \$1,714 per student. Major costs of the project include staff at each site to guide the program implementation, including a lead teacher for curriculum coordination, site marketing, and overall planning and implementation, and an instructional coach to support the teachers with strategies to strengthen the transfer of their new professional learning into the classroom. The proposed budget will also provide each school with a magnet teacher whose curricular specialty relates to the magnet theme, and with expert consultants to provide high quality professional development for all teachers at each site. The MSAP Program staff at the District office will include the grant-funded magnet curriculum specialist and recruitment specialist, as well as the district-funded

Project Director (in-kind). The proposed budget will also support the critical marketing efforts to be carried out at the district level by the recruitment specialist and supported at the school level by the principal and lead teacher. An external evaluator will conduct the MSAP project evaluation. *These costs are reasonable and essential* to meeting the goals of raising academic achievement, reducing minority group isolation, and increasing socioeconomic integration.

The District will maintain its local effort to allocate equipment and supplies from the general fund. A few examples of district-purchased items include textbooks, capital construction improvements, academic software, classroom lending libraries, media development and the District's public television broadcasting network. Florida legislation requires a vendors' bid process to ensure the highest quality equipment and instructional supplies are procured at the most competitive price. The Purchasing Director will work closely with the MSAP Project Director and other grant personnel through this process.

All MSAP costs are clearly planned to support the project and clearly delineated in the budget narrative. The budget will directly support the desired changes for the magnet schools, directly in relation to the objectives for the project and directly aligned with the MSAP Purposes.

***I(b) Resources available to the applicant to carry out the project if funds were not provided***

If funded, the School Board has committed to adequately sustain the high quality of the new magnet school programming beyond the grant period, with transportation, specialized staffing, and other costs associated with the unique, non-traditional themes. However, adequate start-up funding is critical to achieve success and meet the project goals and objectives. Without grant funds, the District would NOT be able to turn these schools around to the extent necessary to create successful magnet schools of choice. This project requests MSAP funding that is focused on those magnet themes that are most in-demand in the county and most expensive and difficult

to set up. After the high-level of start-up costs are covered, the District will find the resources necessary to support the continuation and high quality of these magnet school programs.

Due to the high poverty in each of the schools proposed in this application, all are designated as *Title I schools* and receive an additional \$327 per student in Title I funding to implement the instructional program. This funding is specifically allocated for improving academic achievement, primarily focusing on reading and math. While these funds have supported school improvements, Title I funds will NOT cover the start-up costs of the proposed magnet schools. However, *Title I funds can be leveraged in conjunction with MSAP funds* to ensure that the students in these schools continue to raise their academic achievement.

If funded, the SDPBC will provide *in-kind support* above basic funding for this project. The Superintendent will assign Ms. Sandra Wesson to assume the role of Project Director (50% in-kind) due to her experience and expertise in direct alignment with this project's objectives, her knowledge of IB at every level, her experience in IBO leadership roles on Iauthorization teams and as an IBO leadership trainer and evaluator, and locally, for her experience as the Project Director of the District's highly successful 2007 MSAP grant project. Additional personnel expertise will be donated to the project, including time and expertise to be contributed by the educational technology specialist (50% in-kind), the STEM curriculum coordinator (25% in-kind), and the Arts curriculum planner. See *Quality of Personnel* for more information.

The SDPBC will also provide *transportation* to the new magnet schools on an in-kind basis. The routes are being re-designed to provide transportation to magnet choice students from throughout broad geographic zones. In addition to providing bus transportation to and from magnet schools during the school day, the District plans to make a special effort to provide the

proposed magnet schools with *activity buses* so that students who travel over a distance to attend will have equitable opportunities to participate in an extensive array of extracurricular activities.

Throughout the project planning process, a tremendous amount of excitement, interest and support was garnered from a variety of partners, and 37 *partnership letters* are part of this application. This project has engendered support from the cities where the schools are located, from several science research institutions, and many more who have committed to contribute a variety of authentic learning experiences. *(See (d)(2) for more details on partner commitments.)* Partnerships will continuously be expanded and strengthened throughout the project.

***I(c) The extent to which costs of the project exceeds the applicant's resources***

The costs to implement the proposed magnet schools are significant and exceed the District's resources. The District does not have the resources needed to initiate this project without MSAP support, and lacks the essential start-up funds to develop the highly specialized curriculum, support the strong, theme-specific professional development for teachers, or purchase the sophisticated technology and theme-based interactive learning centers necessary to make these magnet schools a reality. In fact, the District presently faces costly challenges just to meet the needs of its current school operations.

Florida school districts are state-funded through the provisions of the Florida Educational Finance Program (FEFP), enacted in 1973 to equalize educational opportunities for all students. This funds a base amount per student. Funds raised through local property taxes are allocated to the state and redistributed statewide to all school districts, using the FEFP formula, which falls short of meeting the District's needs. The key feature of the FEFP is to base financial support on the individual student in a particular educational program rather than on the number of teachers or classes. Program cost factors associated with particular programs, such as special needs

students, are determined by the legislature. However, enhanced program cost factors for students in magnet programs are not funded under the FEFP formula.

Historical budget data demonstrates a downward trend in per pupil funding by the State. Despite annual growth in the SDPBC's student population, state revenues have decreased annually since 2008. With the gradual economic recovery since 2008, the Florida Legislature finally approved an increase in per student funding for FY16. Even though funding increased this year, District funds per unweighted full-time equivalent (FTE) student are still \$216 less than at the start of FY2008. *As a result, the District is educating more students with less revenue.*

The capital budget has been a major concern to Florida districts that continue to be seriously impacted by the Legislature's 25% reduction to local capital improvement taxing authority. The SDPBC has lost over \$865 million in capital revenue since 2009 when the first reduction was approved. To balance the FY16 budget, \$82.7 million in forecasted needs were left unfunded.

The major portion of SDPBC's general revenue funding comes from the State which relies heavily on property tax revenue, which has been sliding annually since the recession and the housing crisis. Florida residents have been losing their homes and falling off property tax rolls. According the *U.S. Foreclosure Market Report* (Jan. 2016), Florida posted the highest foreclosure rate in the nation in 2014 (twice the national average), with one in every 32 homes in foreclosure statewide and one in every 33 homes in foreclosure in Palm Beach County.

Further exacerbating the funding crisis is Florida's Class Size Amendment (CSR). Approved by voters in 2002, the Florida Legislature has severely underfunded this amendment every year since. Consequently, the additional costs have been passed on to each district. The CSR sets limits for the maximum number of students in a classroom. These limits apply to individual classes so that no classroom may contain more students than allowed by state constitution. The

Legislature requires districts to adhere to these limits or funding is withheld. For the current year, the SDPBC has employed an approximate 500 additional teachers for the purpose of meeting mandated limits, costing an extra \$32 million, further impacting instructional funding.

Additionally, meeting the educational needs of SDPBC's extremely diverse population means ever-increasing pressures on the budget. While in the past, the community has been supportive of bond issues, the resources available in these fiscally-tight years are increasingly more limited. With Palm Beach County still reeling from the Great Recession, it is politically impossible for the SDPBC to access additional revenue through a successful bond election any time soon. The cost factors associated with educating special needs and ELL students (15% and 17% of the population, respectively) have increased dramatically due to the nature and vast needs of these students. Even with significant federal funding, the needs consistently outweigh funding. *The SDPBC's student population is one of the most diverse in Florida, and represents a greater funding challenge, a factor that is largely unaccounted for in the FEFPP.*

Compounding these fiscal difficulties, the student population presents increasing challenges with growing numbers of economically disadvantaged, English Language Learners, and students presenting complex needs for exceptional children services. In order to successfully implement the programs described in this proposal, it will require greater fiscal resources well in excess of those currently available to SDPBC

***1(d) Difficulty of effectively carrying out the approved plan... including consideration of how the design (type of program proposed, location of magnet school within LEA) impacts ability to carry out approved plan.***

With MSAP funding, the SDPBC proposes to completely convert five of the District's neediest and most minority-group isolated schools into school-wide magnet programs offering high-caliber, interest-driven, thematic curricula that will raise student academic achievement and

become in-demand schools that will attract a diverse group of new students to apply and enroll by choice, thereby reducing minority group isolation and increasing socioeconomic integration.

These new magnet schools are located in different geographical locations and municipalities within the county. Current perceptions of the demographic and economic conditions in the communities where the proposed schools are located pose a challenge in attracting students from the targeted feeder communities. Students from the feeder schools reside in suburban communities with lower crime rates and higher yearly incomes than those of the proposed magnet school programs. The MSAP funding will be crucial to the overall school reform efforts for innovative school reform and the attainment of high student performance, components which are essential for magnet schools to flourish and be competitive in the future.

**PERCENTAGE OF ECONOMICALLY DISADVANTAGED STUDENTS**

<b>Palmetto ES</b>	<b>Grove Park ES</b>	<b>Watkins MS</b>	<b>Carver MS</b>	<b>Congress MS</b>
<b>97%</b>	<b>93%</b>	<b>88%</b>	<b>86%</b>	<b>87%</b>

Currently, *negative perceptions of the target schools persist*, partly due to the demographic and economic conditions in these schools’ neighborhood zones, posing a challenge for voluntary, magnet enrollment by targeted families, many of whom reside in suburban neighborhoods, often in gated communities, and attend traditional schools close to home. These schools are all Title I-designated and populated with students from traditionally-defined “minority” groups, many of whom come from low income homes, where living conditions, nutrition, and health are greatly compromised. Many of these families are first generation immigrants and, consequently, language is often a barrier to supporting the educational needs of their children.

All five proposed magnet schools have significantly large concentrations of high needs students. These schools have consistently *scored lower on state-wide assessments* than the district average, a fact that has often been magnified by media publicity of test scores,

reinforcing their negative public image and leading to steadily declining enrollment as families with resources leave to home school, private school, or competing school options. The table below illustrates the differences between performance in these schools and district averages. The negative public perception of these schools could prove to be difficult in carrying out the proposed plan. These schools need to reverse this trend with attractive, high-interest, distinctive magnet curricula that is enriched beyond the regular school program.

2015 Florida Standards Assessment			
	<i>Percent of Students Passing (Scoring Satisfactory or Above)</i>		
	<b>English Lang. Arts</b>	<b>Mathematics</b>	<b>Science</b>
<b>Grove Park Elementary School</b>	<b>32 %</b>	<b>34 %</b>	<b>31 %</b>
<b>Palmetto Elementary School</b>	<b>41 %</b>	<b>46 %</b>	<b>45 %</b>
<b>HL Watkins Middle School</b>	<b>35 %</b>	<b>40 %</b>	<b>32 %</b>
<b>Carver Middle School</b>	<b>29 %</b>	<b>33 %</b>	<b>37 %</b>
<b>Congress Middle School</b>	<b>37 %</b>	<b>39 %</b>	<b>41 %</b>
<b>SCHOOL DISTRICT OF PBC</b>	<b>55 %</b>	<b>56 %</b>	<b>61 %</b>

Public magnet schools today must compete with private schools, charter schools, virtual schools, and other alternative school models designed to recruit students who may share common social and academic interests. Therefore, magnet schools must offer groundbreaking curricular models to attract students and remain competitive. It is the innovative and unique curricular aspects of magnet schools that will create excitement and draw the interest and applications from new students to the schools. The terms most often used to describe the most successful magnet schools - innovative, unique, exciting – can be translated into an expensive and challenging undertaking that involves substantial financial obligations as well as a great deal of time and effort on the part of many staff members.

*The quality, excitement, and lure of the new magnet schools must be powerful enough to prevail over the poor reputation and negative stereotypes of these urban schools.* To create

these innovative new magnet programs capable of attracting magnet choice students to achieve project objectives, a great many curricular enhancements must be made. All five schools will be fully transformed and revitalized to create a strong, appealing identity, to provide more rigorous learning in more challenging academic programs, and significantly increase student achievement for all students. With the MSAP funding requested, the District will be able to accomplish the objectives as set forth in this application.

**COMPETITIVE PRIORITY 4 – PROMOTING STEM EDUCATION (5 Points)**

***4) Improve student achievement/related outcomes by supporting partnerships to give students access to real-world STEM experiences and teachers access to STEM professional learning.***

A major partner to this project will be the Scripps Research Institute, located in Palm Beach County. Scripps will provide a number of authentic STEM education outreach programs intended to advance bioscience education and to inspire the students and teachers in the three proposed magnet middle schools. Scripps has committed to provide STEM classroom resources, authentic hands-on STEM learning opportunities in a number of scientific disciplines for the students, and guest speakers in the classrooms, with a particular emphasis on minorities and women scientists speaking and presenting themselves as role models. To this end, Scripps is promoting diversity in the sciences, and will invite all 8<sup>th</sup> grade girls in the three middle schools to a special girls-only STEM program taught by female scientists, postdoctoral researchers, and graduate students, designed to inspire and motivate the magnet middle school girls to explore a future career in the biosciences. Scripps will also offer authentic STEM learning for middle school teachers in support of curriculum development, including invitations to attend an innovative series of in-person lectures and STEM interactive online professional development on bioscience-related topics, including microscopy workshops, and the “InSPIRE” middle school

teacher workshop focused on bridging math and scientific inquiry. No fees are associated with these activities. A Scripps representative will serve on the project's Magnet Advisory Council.

Another exciting STEM partner to the project is the Max Planck Florida Institute (MPFI) for Neuroscience, also located in Palm Beach County. MPFI will work with project middle school students and teachers to promote scientific literacy and open young people's minds to career possibilities in the bioscience field. MPFI scientists will join Scripps Scientists in the collaborative outreach program "Neuroscience Saturday" for all interested magnet middle school students, teachers, and parents. Scientists will lead the students to explore topics such as brain structure and function, the biology of learning and memory, and cutting edge imaging techniques through multidisciplinary, hands-on/minds-on learning. Another activity for our middle school students will be the MPFI Scientific Career Panel. Students will have the opportunity to engage with scientists who are in different stages of training, from undergraduate interns to post-graduate research scientists, who will discuss what inspired them to choose this career and the educational and research backgrounds that got them where they are today. The MSAP Magnet Advisory Council will include a representative from MPFI among its members.

As another project partner, Loggerhead Marine Center has committed to offer outreach educational programs at the school site and/or 20 to 45-minute virtual field trips for magnet school classes through the use of Skype on their personal digital devices. The outreach programs will offer hands-on/minds-on learning activities that focus on the anatomy and biology of sea turtles and other marine life. Through use of artifacts and replicas, the diversity of sea turtles and their unique marine adaptations will be explored. In the virtual field trip, students will see sea turtle patients and sea turtle recovery tanks and the turtle yard on their "tour," exposing them to the importance of environmental stewardship and ocean conservation.

The guides will discuss sea turtle behavior, morphology, habitats, nesting, etc. Teachers will be given codes to create a free account to link with the tour guides. The Loggerhead education team will work with K-8<sup>th</sup> grade teachers to design a customized, age-appropriate program with pre and post field-trip activities to build interest and reinforce learning.

Florida Power and Light is offering magnet teachers the opportunity to incorporate renewable energy technology in their teaching plans. Teachers will attend workshops to learn how solar energy works, participate in hands-on lessons, receive renewable energy curriculum materials.

**PBC STEM Education Council** is a partnership of 49 businesses, universities, philanthropic, and community organizations created to address pressing issues in STEM education and identify priority actions that need to be taken to enhance STEM education in Palm Beach County. The MSAP Project Director will attend their monthly meetings. **MISSION:** The PPC STEM (Science, Technology, Engineering and Mathematics) Council represents a unified voice advocating quality STEM education for all students in Palm Beach County. An alliance of public, private and non-profit sectors, the Council works collaboratively to create and promote a world-class approach to STEM education. **VISION:** Our vision is that all students have the STEM skills and knowledge needed for success in education, work, and life in our global community. The MSAP Project will be an agenda item each meeting. The District STEM Coordinator who is an in-kind member of the MSAP team, is a key member of the Council, along with leadership from the Lastinger Center at the University of Florida.

### **COMPETITIVE PRIORITY 5 –EVIDENCE OF PROMISE (5 Points)**

5) *A process, product, strategy, or practice supported by evidence of promise.*

#### **Citation #1**

Granger, E. M., T. H. Bevis, Y. Saka, S. A. Southerland (2010). Large Scale, Randomized Cluster Design Study of the Relative Effectiveness of Reform-Based and Traditional/Verification Curricula in Supporting Student Science Learning. National Association for Research in Science Teaching. Philadelphia, PA. March 22, 2010.

**Meets What Works Clearinghouse (WWC) evidence standards without reservations.** Paper and What Works Clearinghouse Intervention Report included in the Appendix. Link to paper:

<http://slideplayer.com/slide/7614128/>

Link to Report: [http://ies.ed.gov/ncee/wwc/pdf/intervention\\_reports/wwc\\_gems\\_060512.pdf](http://ies.ed.gov/ncee/wwc/pdf/intervention_reports/wwc_gems_060512.pdf)

**Citation Outcome(s)**

*1) the outcomes in the study presented* The study found that achievement on post-tests for space science content for students in grades 4 and 5 who were taught the GEMS Space Science Sequence by teachers who participated in GEMS related professional development were positive and statistically significant (0.546) compared to the control group who were taught the district provided space science sequence by teachers who did not participate in professional development. Teachers were randomly assigned to use either the GEMS Space Science Sequence or the regular space science sequence offered in the district.

*2) how the outcomes in the evidence relate to the outcomes in your project.* Student achievement outcomes (Performance Measure 4.3) in Science are in direct relation to the outcomes for the proposed magnet school theme of “STEM-Infused IB-Primary Years Programme” for Palmetto Elementary School and Grove Park Elementary School.

**Relevance to Proposed Project.**

*Briefly describe the intervention used in the study presented as evidence.* The intervention in the study is GEMS Space Science Sequence, a sequence developed at the Lawrence Hall of Science with expertise and input from scientists at NASA at Berkeley’s Space Sciences Laboratories, GEMS Curriculum developers, and teachers. Sequences provide opportunities for students to develop inquiry skills and abilities, and the curriculum is aligned to Florida’s Science Next Generation Sunshine State Standards. .

How does the evidence relate to your proposed project?The proposed project has a focus on inquiry-based STEM professional development and instruction for student learning, as both an emphasis on professional development as well as a focus on inquiry based STEM learning.

Will your proposed project measure the same outcomes? Similar to the study, the proposed project will measure student science content knowledge.

What link is there between the study presented and your proposed intervention and/or study? If applicable, explain how the population in your project is similar to that used in the cited study.

Mirroring the study, the proposed project will serve elementary school students and teachers. In the study, the intervention was conducted with teachers and students in grades 4 and 5. In the two proposed elementary magnet schools (Palmetto and Grove Park), the intervention will be used in grade 5 where it has been determined to be aligned with state standards. The grade 5 teachers will participate in professional development related to GEMS, and they will use the GEMS Space Science Sequence to teach science to their grade 5 students.

**Citation #2**

Bifulco, R., Cobb, C. D., & Bell, C. (2009). Can interdistrict choice boost student achievement? The case of Connecticut's interdistrict magnet school program. <i>Educational Evaluation and Policy Analysis</i> , 31(4), 323-345.
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**Meets What Works Clearinghouse (WWC) evidence standards without reservations.**

Article in the appendix. Link:: [http://www.jstor.org/stable/25621589?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/25621589?seq=1#page_scan_tab_contents)

**Citation Outcome(s)**

1) the outcomes in the study presented The study found that three years of exposure to a magnet school in the middle school years has positive effects on reading achievement (between 0.219 and 0.265 standard deviations) for suburban students.

2) how the outcomes in the evidence relate to the outcomes in your project.The proposed project supports the creation of three middle school magnet programs in the SDPBC..

**Relevance to Proposed Project.**

Briefly describe the intervention used in the study presented as evidence. The study compared the academic performance of students who entered and won interdistrict magnet school lotteries with the performance of students who entered the lottery.es but were not chosen to attend the magnet schools. At the middle school level, a higher percentage of magnet students achieved proficiency on a standardized reading exam.

How does the evidence relate to your proposed project? The proposed project will use a lottery system to assign students to magnet schools.

Will your proposed project measure the same outcomes? Similar to the study, the proposed project will measure middle school reading proficiency via a standardized reading exam (Florida Standards Assessment).

What link is there between the study presented and your intervention and/or study? If applicable, explain how the population in your project is similar to .that used in the cited study.Both the location of the study and the SDPBC have schools that are racially and economically isolated. Mirroring the study, the proposed project will use a lottery system to assign middle schools students to magnet schools in an effort to reduce racial and economic isolation.

**INVITATIONAL PRIORITY – SOCIOECONOMIC INTEGRATION**

***INVITATION - Increasing racial integration by taking into account socioeconomic diversity using strategies such as neighborhood preferences or weighted lotteries.***

The SDPBC will implement magnets schools which will provide educational environments that enhance each student’s success, such as a diverse setting that promotes understanding of tolerance and fair play, so that the tenets of a democratic society are reinforced by what student experience in schools. ***To promote socioeconomic integration,*** reduce minority isolation, and

increase interaction among students of different backgrounds, the *weighted lottery selection* process is designed to promote equity and diversity in the assignment of students to the magnet schools. Each year, for proposed magnet schools with attendance zones, the Project Director will work with the Planning Director to estimate the projected enrollment of zoned students who will be attending the magnet school. Each school's building capacity, less this projected enrollment, will be the number of available seats for the selection process. The Project Director will implement the selection process guidelines for the oversubscribed magnet schools as set forth herein that will take into consideration the diversity of the district-wide student population.

- a. If the applicant pool for a given magnet school contains more applicants than available seats, a weighted lottery process will be used to select students of all races, ethnicities, socioeconomic and language backgrounds, and both genders, so that the composition of the magnet school will reasonably reflect the diversity of the SDPBC, as follows:
  1. Applicants with preference will be admitted to the magnet school first, prior to conducting a lottery for other student applicants. If the number of preference students exceeds the seats available, a lottery will be conducted. Where there are more applicants than seats available in a magnet school, the SDPBC will give preferences as follows:
    - a. Siblings – Applicants will be admitted if they are siblings of students already admitted.
    - b. Magnet Continuation – Applicants will be admitted if they have completed the lower grades preparatory magnet program in a K-12 magnet curriculum continuum.
  2. Next, the SDPBC will analyze the applicant pool to determine whether using a fully random lottery to fill the remaining seats (after admitting zoned students and program continuation students), would result in a student composition substantially reflective of the

diversity of the school district. If the results would be appropriate, the remaining seats will be filled through a random lottery.

2. However, if using a fully-random lottery to fill the remaining seats would likely result in a school enrollment that is not substantially reflective of the diversity of the school district in terms of the designated variables, then a weighted random lottery selection process will be conducted according to the following procedure:

- a. The applicant pool shall first be **weighted for geography**. Then, that new weighted pool and existing enrollment will be analyzed for other factors listed below. If the likely school enrollment would fall within the appropriate range for all of those factors, then a lottery will be conducted using the pool weighted only for geography;
- b. If further weighting is needed after weighting for geography, the pool may then be **weighted for family income**. Then, that new weighted pool and existing enrollment will be analyzed for other factors below. If the likely school enrollment falls within the appropriate range for all of those factors, then a lottery shall be conducted using the pool weighted only for geography and family income;
- c. If further weighting is needed after weighting for geography and family income, the pool may then be **weighted for the student's home language**. Then, that new weighted pool and existing enrollment will be analyzed for other factors listed below. If the likely school enrollment would fall within the appropriate range for all of those factors, then a lottery will be conducted using the pool weighted only for geography, family income, and home language;
- d. If further weighting is needed after weighting for geography, family income, and student's first language, the applicant pool may also be **weighted for gender** to the

extent necessary to limit the estimated variation in gender to a reasonable degree, and a random lottery then be held.

**(a) DESEGREGATION (30 Points)**

***(a)(1) Effective plan to recruit students from different backgrounds to magnet schools.***

Admission to each proposed magnet school will be available to all students who live in the attendance zone for each school. Additional students from outside the neighborhood must be actively recruited to apply to attend the magnet schools, and these seats will be filled by lottery with students in the applicant pool. The proposed new magnet schools are all Title I schools that were selected due to minority group isolation, site location, staff buy-in, and under-enrolled school facilities allowing space for students from outside of the neighborhood to apply to the magnet school by choice. For each proposed magnet school, those who live in the attendance zone are predominantly minority group students. The underrepresented students targeted for recruitment are non-minority. The targeted feeder schools are located in suburban neighborhoods populated by non-minority students. This project will focus most of the marketing and recruitment efforts on these targeted neighborhoods to attract new students to the proposed magnet schools from the underrepresented group. Each year, the total population at each magnet school will increase and become more diverse, the proportion of minority isolated students will be reduced, and socioeconomic integration will increase.

*Student recruitment is critical to a magnet school.* Since magnet school enrollment is entirely voluntary, students must be actively recruited and attracted to the school, and each magnet school must be wholly converted into a *real and viable choice*. Marketing and student recruitment will be a particular challenge in the first year, since it will commence immediately upon notification of grant award and funding, even before the schools have begun to undergo the

comprehensive transformation into magnet schools, as planned. Student recruitment will be complicated by the need for students and their families to make decisions about their magnet school of choice before these sites have much of a concrete nature to show prospective students. For this reason, when students who choose proposed magnet schools actually arrive on campus, they need to see evidence that the new program actually exists. To address this, a relatively high proportion of the first-year budget has been reserved for purchase of new interactive learning centers to help to sell the magnet and “scream the theme.”

By disseminating promotional material, making presentations, and communicating with families, project personnel will use all available resources and strategies to build awareness and promote a positive community image of the schools. A comprehensive and detailed marketing plan will be implemented to effectively recruit students who will reduce minority group isolation and increase socioeconomic integration in each school. The marketing plan will be designed to communicate, create awareness, and build interest and enthusiasm district-wide, and particularly in the targeted neighborhoods. Television, radio, and newspaper media will be used to communicate with press releases, announcements, interviews, and advertisements, as well as social media where the magnet office and each magnet school will manage a twitter and Facebook account, promoting exciting theme-related magnet events, such as student projects, collaborations, guest speakers, field research, as well as promotional information about applying for the magnet school. The interactive project website will be designed, maintained, and promoted on the front page of the district’s website. Each school’s website will be redesigned professionally to promote the individual school’s unique brand and theme, and communicate the exciting opportunities and educational benefits for students who choose to attend.

A project brochure to promote the five proposed magnet schools will be developed and disseminated to the homes of target applicants to increase awareness of the new opportunities. Brochure information will include an easy-to-understand explanation of the online application process. The brochure, along with an invitational letter, will be mailed directly to the home of every target student. All brochures will be professionally printed and written in a tone that encourages students/ families to make the magnet school choice. All written marketing materials will be translated and provided to families in Spanish, Portuguese, and Haitian Creole.

Each year of the project, the recruitment specialist will carry out the on-going district-wide campaign to bring these five new magnet schools to the attention of the public and attract a diverse group of new students to each school. The recruitment specialist will be responsible, on a full-time basis, for designing and leading the marketing, communications, and recruitment efforts for the project and for coordinating an aggressive focus on recruiting students from targeted neighborhoods and local private schools to choose the magnet schools. Each year, the marketing plan will include a schedule of promotional activities for district-wide public locations and events, including the district's annual School Choice and Career Fair, Sunfest and other local arts and cultural fairs, and a series of events at various venues from large, popular malls to smaller town hall meetings.

The recruitment specialist will work with each principal and lead teacher to form a site marketing team to formulate and execute a site-based marketing plan specific to that school and to target feeder neighborhoods aligned with that school. The recruitment specialist will work with each team to develop a recognizable brand and logo that is unique to the school. A graphic artist will design the logo and high quality marketing materials to communicate the exciting opportunities and benefits offered by each magnet school. The lead teachers will attend regularly scheduled meetings with the specialist to plan together so that effective strategies can be duplicated. This collaborative planning will assure that individual school presentations and

events are not scheduled within too close of a timeframe or location, and to assure that lead teachers work to assist each other and not impede each other's efforts.

For large events, the public's opportunity to learn about the new magnet schools of choice will be announced and promoted with visually exciting effects. Each school will have an attractive marketing booth with professional quality displays to promote the school's theme and brand on a portable tabletop exhibit with interactive media capabilities to attract interested families to the booth to learn about the new magnet school. Each booth will have an attractive literature display to distribute appealing brochures, informational pamphlets, invitations, applications, and other promotional items to communicate the unique opportunities and benefits of the school. These displays will be used at public events, including occasions in specific neighborhoods where maximum contact and communications can be made with target families.

Additional events to highlight the magnet school opportunities will include presentations to parents in targeted schools, childcare centers, summer camps, and community events. Magnet school-based events include fall and spring open houses, theme nights, demonstrations and performances, and invitations to tour the school and get an inside view of the magnet in action. Community and business support will be evidenced at public marketing events and open houses.

***Over the three years of the project,*** the recruitment specialist will provide the leadership for the implementation of both the large-scale and the targeted marketing and recruitment campaign. ***During year one,*** the focus will be on planning, preparing and publishing materials, developing media awareness through TV and radio interviews and purchasing advertisements, coordinating promotional activities with business and community partners, training principals and staff in school-site marketing strategies, promoting and providing presentations on site and at numerous locations within the targeted neighborhoods, and carry out all marketing activities and

events to attract the targeted student enrollment for each school. *During year two*, all marketing activities and efforts from year one will be continued and expanded, with additional focus on broadening the scope of community awareness; generating more partnership support; and enhancing, improving, and expanding marketing strategies based on analysis of first year marketing efforts and student applications. *In year three*, while all marketing and recruitment activities will continue, the project management team, magnet advisory council, and site marketing teams will focus additionally on building on-going capacity by developing more partnerships to support efforts beyond the grant cycle, bringing communities into schools as mentors and volunteers for school events and activities, and expanding improvements of first and second year recruitment strategies and activities based on an analysis of success.

Marketing funds are budgeted each year to actively market the schools and inform all potential students and their families about the exciting learning opportunities available. The Project Director will monitor applicant pools weekly to ensure that recruitment strategies are effective, and that the feeder schools' composition is not adversely affected.

***(a )(2) Foster interaction among students of different backgrounds in classroom activities, extracurricular activities, or other activities in the magnet schools.***

The SDPBC has extensive knowledge, experience, and success in creating and maintaining effective magnet schools of choice. High-quality thematic programs will be offered in schools that are currently enrolled with substantial minority student populations. The selected magnet themes represent innovative curricula with instructional approaches that motivate students to participate in a wide variety of learning projects and activities. These magnet themes epitomize the wide range of interests that can guide students to become knowledgeable, creative, and well-rounded citizens of the world. *These powerfully attractive magnet themes represent a real and*

*viable choice for students.* They will attract diverse students through choice to learn in unique and innovative learning environments with opportunities not available in traditional schools.

*To foster interaction within each magnet school* for students from different social, economic, ethnic, and racial backgrounds throughout the school day, the SDPBC is fully committed to providing all students a high-quality, inclusive educational experience. Each proposed magnet school will be free of stereotypical patterns and functions that could be a barrier to open participation by students of different backgrounds. Extensive professional learning will enhance instructional practices that meet the needs for differentiation, access, inclusion, and achievement. The innovative magnet themes will be motivational to students from a wide variety of backgrounds that come together out of interest and choice.

*Meaningful Diversity* - Historically, magnet schools have taken on a significant role in promoting visionary school reform that values a diverse student body as a starting point for the delivery of meaningful, scaffolded academic programs. The value of diversity in the school population is more than simply recruiting a diverse student population, and it is more than having diverse students in classrooms. Diversity becomes meaningful when there is a school-wide commitment to seeking out the greatest strengths of all learners in the school's population – learners from different social, economic, racial, and ethnic groups, learners of different background skills and languages, and learners who manifest intelligence differently. As the magnet schools become more diverse, the children of different racial, ethnic, and social backgrounds will interact through the school day and after school. They will be scheduled in the same classes, the same learning groups, the same lunch times, the same elective classes, and the same extracurricular activities or afterschool clubs. This project will strive for both equity and

excellence through integrated schools and classrooms, with teachers trained to use strategies that have proven to foster the interaction of students during the school day, such those below.

***Heterogeneous Grouping*** - The first step in ensuring the interaction of students from different racial, social, and economic backgrounds is to put them in the same classes. To accomplish this, the magnet schools will avoid “ability” as the sole criteria for scheduling classes. Each magnet school will prioritize heterogeneous grouping, so that all class enrollments reflect that grade level’s enrollment, for each of the major racial/ethnic groups (African American, Hispanic, White) within  $\neq$  15 percentage points, leading to school *and class* enrollments that reflect the make-up of the school as a whole. The principal and lead teacher of each magnet school will monitor student participation within classrooms to ensure participation of students with varied backgrounds as represented within the school. Monitoring will occur regularly to remedy any imbalances that do occur as soon as they are apparent. *Heterogeneous grouping presents challenges* – even to teachers who are deeply committed to equity principles. With teachers at the center of these efforts, providing inclusive, effective learning opportunities for all students, this project will be dependent upon meeting the needs of teachers, too, as they serve increasingly diverse students from different backgrounds. To provide support for staff in managing diversity, teachers will receive technical assistance in their ongoing professional learning on topics to include culturally responsive teaching, learning styles, inclusive classrooms, and differentiated instruction.

***Common-Interest Projects.*** The interdisciplinary curriculum designed for each magnet school will be structured to give students choices of learning projects in which to participate. Projects, performances, presentations, and other activities will be planned purposely to bring groups of students from different backgrounds together in classrooms, in grade levels, in learning

activities, and throughout the entire school to interact in a positive manner. Just as common interests bring students to apply for the magnet schools in the first place, students learning together on a common project will also find themselves with others of all backgrounds who share their interests. This will encourage diversity in relationships as students develop a respect for their peers and recognize them as individuals who share their interests.

***Cooperative Learning*** - Within classrooms, magnet school students will study, solve problems, and design projects in small, cooperative instructional groups as a strategy to bring together students of different backgrounds, and to offer more prospects for students to learn from and to teach one another. Challenging project-based learning in cooperative learning teams will create environments in which all students are encouraged to be full and contributing members. Cooperative learning most often involves heterogeneous teams of students of different academic levels, working together toward a group task in which each member is individually accountable for part of an outcome that cannot be completed unless the members work together, thus making the group members positively interdependent. When students learn to work cooperatively in groups, they have a chance to explore ideas, justify views, and synthesize knowledge within the supportive group environment. The heterogeneous groups ensure that students are learning together in a respectful, courteous, and democratic environment.

***Differentiated instruction*** will be used to provide multiple paths so that students of different abilities, interests, or learning needs experience equally appropriate ways to absorb, use, develop and present concepts as part of the learning process. It allows students to take greater responsibility and ownership for learning, and provides opportunities for peer teaching and cooperative learning. In preparation for differentiation, the teacher diagnoses the differences in readiness, interests, and learning styles of all students in the class, using a variety of performance

indicators. The essential curricula concepts will be the same for all students, but the complexity of the content, learning activities, and or products will vary so that all students are challenged and no students are frustrated. Magnet school teachers will orient their pedagogy and curricula around differentiation as a means of advancing all learners.

***(a)(3) Ensure equal access and treatment for project participants who have been traditionally underrepresented in courses or activities offered as part of the magnet school, e.g., women and girls in STEM and disabled students.***

This project will serve all students in an equitable manner to foster human and educational relations and help all students attain equal opportunities to participate in courses or activities within the magnet schools. The SDPBC serves an academically, culturally, socio-economically, and racially diverse population and is committed to equal access and treatment for all students. The district's nondiscrimination policies guide and govern decision-making and participation in educational programs, mandating equitable treatment of all persons participating in its programs, with special attention to fairness toward those who are members of underrepresented groups. Board Policy mandates equal access and treatment for all students, without regard to race, color, religion, sex, gender, ethnicity, linguistic preference, political beliefs, sexual orientation, social/family background, marital status, age, national origin, or disability. All magnet staff will adhere scrupulously to the nondiscrimination policy.

As a result of MSAP funding, comprehensive school reform, and the strategic marketing effort, the proposed magnet schools will attract a new student population of racially and ethnically diverse students. They will be purposefully designed to be ***inclusive*** of students with disabilities, students with limited English proficiency, and 504 students. Explicit strategies have been planned to foster interaction among students of varying backgrounds. Parents will be

encouraged to be actively involved in choosing the program most appropriate for the interests and needs of their children and to remain active in the magnet schools.

The educational programs will be assessed on a regular basis to ensure equitable opportunities to learn. Courses offered and instructional methods will be reviewed to ensure that all students, girls and boys, language learners, disabled, and minority students can participate and learn fully. Teachers will use a variety of approaches to accommodate different learning styles and knowledge bases. Collaboration, hands-on learning, and the use of visual and auditory media and technology will supplement conventional emphases on verbal abstractions in instruction.

The District will take proactive measures to ensure that *both male and female students have equal access to and treatment in all aspects of school life*, especially in courses or activities that are traditionally underrepresented by either gender. Students will be encouraged to enroll in courses and activities based on interests and needs rather than gender.

For STEM courses and specialized STEM activities in the magnet schools, particular encouragement and emphasis will be placed on minority and female students engaging in STEM, in which they have been traditionally underrepresented. Family STEM nights will be offered in each school as one way to encourage girls to develop positive attitudes and self-confidence toward these subjects. Additionally, through our partners, the magnet school students will be exposed to female role models who have succeeded in the STEM fields. In particular, the SCRIPPS Research Institute and the Max Planck Institute for Neuroscience will intentionally provide female and minority scientists and other STEM professionals as guest speakers and mentors. Underrepresented students will be encouraged and provided every avenue for success.

Additionally, the SCRIPPS Research Institute, a major partner to this project, is particularly interested in supporting diversity in the sciences. To this end, they will plan an outreach STEM

program for the girls from each of the three middle schools to attend a free STEM Academy, sponsored by the Women’s Foundation of Palm Beach County and hosted by SCRIPPS Florida.

*Students with disabilities* will also have equitable opportunities and will be encouraged to participate in magnet school activities within magnet schools. Provisions have been made to ensure that students with disabilities are able to fully participate in activities that match their interests and abilities. Assistance for low-vision and hearing impaired students will be provided, if needed, from the district’s special education resource program. Adaptive resources to make technology accessible will be provided, as needed, through exceptional student education.

All MSAP schools are located in facilities that will accommodate physically challenged students; however, these sites will provide further accommodations on a case-by-case basis, as needed, to ensure that the proposed programs are accessible to students with disabilities. The District adheres strictly to the provisions outlined in the ADA and has committed to ensuring equal access and treatment for students with disabilities. Every effort will be made to identify and eliminate potential barriers within the programs, courses, or activities.

*Fostering inclusiveness to the maximum degree possible* is a major priority in the design. Careful attention has been given to planning instructional strategies to will make the challenging thematic curriculum content in each school fully accessible to all groups of students, including ELL students and students with disabilities. All instructional and support services will be integrated fully into the delivery of each school’s innovative curriculum. The magnet themes are built around the premise that all students are capable of performing at high academic levels. All magnet staff will be trained in culturally responsive teaching, learning styles, and inclusive classroom strategies. Principals will monitor participation to ensure that all groups have equal access to all aspects of and to specialized learning tools and technology of the magnet programs.

All students at applicable grade levels will be eligible to apply on the basis of interest to a particular magnet theme. To increase awareness of and participation in the project, the magnet office and school sites will distribute informational brochures and correspondence, make presentations at community gatherings and school events, and obtain feedback through surveys and informal interviews. Informational materials to be distributed through the project will be sensitive to the needs of all students and families, and all materials will be provided in multilingual formats (English, Spanish, Haitian Creole, and Portuguese). Entrance to a magnet school is noncompetitive and voluntary. *The District will NOT use academic testing, auditions, or other qualifications for admission to the magnet schools.* Should a magnet school be oversubscribed, a lottery procedure will be used to select participants from among the applicants. Once admitted to any one of the magnet schools, students will be eligible to participate in any activity available to students at their respective grade levels in the school-wide magnet schools.

***(a)(4) Effectiveness of all other desegregation strategies proposed for reduction of MGI in schools with substantial proportions of minority students.***

MSAP funding, along with committed personnel ready to do the necessary work for effective implementation, will establish powerfully attractive magnet schools, each with a specialized focus that is compelling enough to draw a diverse range of families to attend a school outside of their neighborhood, even for those who must travel to a different, even distant neighborhood.

***Setting Targets*** - Assessment and continuous improvement will be built into the marketing and student recruitment process. On a weekly basis, the MSAP Project Director and recruitment specialist will review the applicant pool data weekly to determine the size and diversity of the pools for each school regarding race/ethnicity, free/reduced lunch status, and gender. Adjustments will be made quickly, as needed, to ramp up or modify marketing and recruitment

activities. On a monthly basis, the MSAP management team will engage in an analysis of marketing strategies and outcomes, using data such as changes in school enrollments and demographics, the number and diversity of students who apply, attendance at open houses and magnet fairs, the number of website hits, and other modes of feedback from various events and activities. They will carefully analyze what recruitment activities are proving to be most effective and what will be most effective, including the best approaches for different target areas, and modify plans or develop new plans for marketing and recruitment activities based on the needs.

The magnet school marketing teams will plan active marketing strategies for *involving and informing parents* about the educational opportunities available in the project schools. Parents to be targeted in this effort include both neighborhood residential parents and feeder school parents, as all are magnet school parents. Additionally, to foster involvement, parents will be invited to participate in marketing events and speak to other parents on behalf of the project school.

**Recruitment Training** The recruitment specialist will provide training that will enable school staff and parents on the site-based marketing team to describe the magnet program in clear, compelling and consistent language, as well as enable them to develop their magnet school brand and recruitment strategies. This training will also prepare participants to respond to questions from parents of prospective students during open houses, school tours, or other events.

**Recruitment in Schools** - In addition to other strategies, the recruitment specialist with the principals and lead teachers will schedule focused events and activities at feeder (lower level) schools throughout the district. The MSAP middle schools will hold events for fifth grade students and their families that are designed to inform and excite them about the magnet middle schools, answer questions, provide literature, invite them to upcoming magnet school events or school tours, and encourage them to submit applications. The MSAP elementary schools will

visit daycares, churches, pre-K programs, community centers, and other appropriate organizations to provide information for parents of students who will be entering kindergarten.

Equity is a critical issue, and is critical to the design of this MSAP proposal. This project initiative has been designed to take advantage of the wisdom of our professional educators, our students and families, our communities and businesses, and others who have shared their advice on maximizing conditions to ensure true equity in teaching approaches and learning experiences that truly appeal to students of all backgrounds. This project will be built on a foundation of equity, upon which meaningful educational structures can be created and offered to all students. This proposal is designed to provide the necessary scaffolding to ensure that students will not only be attracted to these five magnet schools, but will be equipped at those schools to take advantage of and succeed in the innovative academic opportunities made available, thereby raising achievement levels for all. These proposed magnet schools must be challenging, innovative, and attractive to the District's highest achievers, but they must also break the old remediation paradigms to ensure that all students can achieve and be successful through these same innovative and inspiring educational opportunities.

**(a) QUALITY OF PROJECT DESIGN (35 Points)**

***(b)(1) Improve student academic achievement for all students attending each magnet school, including achievement in the magnet instructional areas offered by the school.***

***IMPROVE ACADEMIC ACHIEVEMENT*** - The proposed magnet schools are designed to improve academic learning and achievement for all students enrolled in the schools. Measurable goals and performance measures are established in the objectives to quantify the effectiveness of the project, not only to meet academic objectives to which energy and time will be directed, but also to provide a continuum of benchmarks through the project years that will empower students to

proceed toward mastery of those objectives. In the proposed magnet schools, all teachers will set high expectations for themselves and for all students, and students will be energized by exciting and engaging inquiry-based cooperative strategies and will acquire and practice critical thinking skills through inquiry and project-based learning. The challenging, interdisciplinary curricula will be engaging and stimulating for all. Students will be challenged by new learning activities, but they will also have the safety net of academic support and interventions to see them through.

***Individual Student Needs*** Magnet students will inevitably have varied individual academic needs. They will also have unique strengths, experiences, and backgrounds to contribute to the educational experience for all. Addressing academic needs of all students in the magnet schools will begin with an understanding of the students, their strengths, their needs, and teacher knowledge of effective strategies that will enable all students to improve academic achievement and achieve proficiency on challenging state standards. All students, including special needs and ELL students, will need to interact with peers to be exposed to higher level thinking, to be recognized for their contributions, and to be ensured equal access to quality instruction.

***Professional Learning Committees (PLC's)*** Lead teachers and teacher teams in all proposed magnet schools will form PLC's - small groups of teachers with a common mission to improve the academic achievement of their students. The Lead Teacher at each school will schedule and participate in teacher team meetings, including bi-weekly PLC team meetings, monthly student achievement team meetings with the principal, and bi-monthly meetings of the MIC/ Magnet Innovation Council (representing all grade levels, every specialty area, the magnet lead teacher and the principal), monthly meetings of the SAC/School Advisory Council (governance council representing administrators, teachers, parents, business and community members). As needed, the Lead Teacher will also participate with the Special Needs Coordinator

in CST/Child Study Teams meetings that are scheduled monthly (or more often, if needed) with special education teachers, classroom teachers, school counselors, and administrators. Lead teachers will compile a database for their magnet school that includes achievement and assessment data, with teacher recommendations to determine which students require additional assistance or acceleration. The PLC's will collaborate to provide a supportive culture where they inquire, discuss, share, reflect, and create action plans to ensure academic achievement for all students in the school. The first weekly meeting will be designated for interdisciplinary planning so that connections can be made across subject areas. The second weekly meeting will be for interdepartmental planning to monitor student assessment data and ensure that all students acquire the same skills in the same courses regardless of who teaches the section. Teachers will use all available student data to plan informed instruction for all students and make necessary adjustments as needed. Students needing extra assistance will have access to intensive reading and mathematics classes, mentors and tutoring during or after-school.

***Data-Based Interventions*** will be planned, as necessary, to support those students who truly need intensive and individualized support, based on systematic and frequent collection and analysis of student-level data, used along with the teacher's judgment and clinical experience to determine when and how to intensify intervention in reading, mathematics, or behavior. All school and district personnel have access to the District's ***Education Data Warehouse*** which stores all student data electronically and can be sorted to provide teachers and administrators with data reports designed to measure each student and school against various criteria and to provide early warning signs for struggling students.

***Continuous Improvement*** will be an ongoing, integral part of each magnet school. Teachers will use the continuous improvement model, a research-based process using effective practices

for data driven instruction, assessments, and standards, and they will adopt a variety of alternative assessments and use them to inform curriculum and instruction.

***Learning to Read...Reading to Learn*** The single most critical element for success in all subject areas is the ability to read. The focus on developing effective reading skills will prepare the students in the magnet schools for future success. Accelerated learning strategies/interventions are an integral part of this project for all students, enabling them to reach rigorous state content standards, meet academic performance standards, and matriculate successfully to the next level of schooling. Teachers will incorporate effective reading strategies into the curriculum and their lesson plans. As a result, students will receive reading instruction which reflects teacher training in best teaching practices, and will practice reading strategies for reading content area texts and manuals as well as literature. Regular assessment will inform instruction and guide appropriate academic enhancements, enrichment, or remediation, including Title I-funded tutoring, as needed. Magnet students will set goals to independently read a set number of books during each grading period and over the summer. Magnet teachers and students will work together to improve student performance on the Florida Standards Assessment.

***Inquiry-Based Instruction*** will be a foundation of innovative instruction used by all magnet teachers in all five proposed schools. In the inquiry-based classroom, emphasis is on thinking, not telling children what to think. The basic idea is to foster the creative and critical imagination in a learning environment that promotes responsibility, creative thought, inquiry, and standards-based learning and reflection. Infusion lessons and integrated units will help students understand just how the “what” of what they are learning fits into the big picture of their knowledge, and thus learning will be more understandable, relevant, and accessible for students to achieve.

**Defined STEM** is an online program that will be used in the five magnet schools. Students will be actively engaged in STEM lessons that are cross-curricular, focus on 21st century skills, differentiate learning, incorporate non-fiction reading and writing and provide authentic assessment of student understanding. Performance tasks are built from the Understanding by Design framework and present real-world problems within the context of careers and industry. The real-world videos promote relevant connections between college and careers to educational concepts and depict how workers are using math, language arts, science, and technology on the job. The literacy tasks promote high-quality student assignments that develop reading, writing, and thinking skills in the context of learning science, history, English, social studies, and other subjects. Informational and argumentative texts are provided to align with a career-based video.

**Parent involvement** is a major priority of this project. A commitment to facilitating and encouraging parental involvement is essential to this project. Parents are responsible for the education of their children, but educators have the obligation to assist parents in learning about the education process and the potential the parent has in that process. The very nature of a magnet school of choice in itself increases parent involvement. When parents sign the application-of-interest to participate, parents are automatically involved in decision-making about their children's education. All parents will be asked to pledge support to their child's magnet school, to their child's education, to provide a productive learning environment for homework, and to attend student/teacher/ parent conferences. All parents will be asked for a commitment to participate in at least one student/parent magnet interaction workshop. All parents will also be invited to participate in planning for magnet events. When parents are involved, students tend to demonstrate motivation and a better attitude toward school, toward others, and toward themselves. Children from diverse cultural backgrounds tend to do better in

school when parents and teachers collaborate to bridge the gap between the culture at home and at school. Children benefit the most from a true partnership between parents and educators.

***Parent/Student Interactive Workshops*** at all project magnet schools will offer unique learning opportunities during evening and/or Saturday workshops for parents and students on a variety of topics. Some will be common to all proposed magnet schools, and some will be aligned with the school's magnet theme. Parent Interaction Workshops develop parents as teachers as they acquire skills to advance the talents and abilities of their own children. Technology workshops will engage parents in learning about the personal digital device and other technologies the students use at school daily. Seeds of knowledge will be planted and cultivated through the workshops, matured with interdisciplinary homework projects designed for parent collaboration, and ripened further through extension to continuous learning and learning for life. The South Florida Science Center will bring their ***Family STEM Night*** to each magnet school three times/year. Each STEM Night offers a different program of 20 interactive STEM learning activities, experiments, and demonstrations. For example, students and parents together will experience modular robotics, solve music math, build and time a marble rollercoaster, and enter an immersive digital world using the Oculus Rift Virtual Reality Headset.

***Outreach Hands-On Science Labs*** –As a project partner, the South Florida Science Center will provide Outreach Hands-On Science Labs in each magnet school annually. The Center's science education specialists will bring hands-on field trips to the students. The ***STARLAB Astronomy Outreach Labs*** for elementary students will introduce important scientific concepts through a portable planetarium experience that allows students to crawl into an inflatable dome planetarium to view and learn about the stars, planets, and galaxies in “hands-on astronomy.” The Science Center specialists will bring interactive science discovery labs to Watkins, Carver,

and Congress for the middle school students to explore atoms, density, and chemical change in the Chemical Concoctions Lab; use scientific observation to sort and classify genuine fossil shark teeth in the Shark Tooth Lab; and go through the steps of the scientific method to hypothesize who committed the crime in the Crime Scene Sleuth Lab.

**STUDENT ACHIEVEMENT IN MAGNET THEMATIC FOCUS**

In addition to standardized testing, each of the proposed magnet schools will put into place systems to allow administrators, lead teachers, and classroom teachers to assess student achievement and progress within the magnet learning theme or focus. Teachers and staff are key to developing and sustaining a magnet school that works, and curriculum design teams will ensure the development and use of the student digital portfolios, authentic assessment and performance based assessment, to monitor progress of students within the themes.

***Magnet Curriculum Development*** - The MSAP objectives have set incremental progress benchmarks for curriculum development each year of the project. The MSAP curriculum specialist will support all five schools in this effort. The staff and teachers at each proposed magnet school will be fully invested in the development of high quality curriculum. Supplementary time after school, Saturdays, and summers will be scheduled for teachers of all subjects and grade levels, and in theme-alike schools, to come together to learn, share, and trade expertise as they fuse their experience and knowledge into multidisciplinary curricular units and student projects, and develop thematic curriculum in both vertical and horizontal formats. The magnet curriculum will meet or exceed challenging State requirements at each school and will provide innovative, quality, and highly motivating learning opportunities in interactive learning environments that are not available in traditional schools in the district. The proposed magnet schools will offer innovative themes that use an interdisciplinary curriculum and approach to

strengthen skills and academic knowledge, and provide various venues for students to learn and acquire integrated knowledge of subjects. A variety of traditional and alternative assessment practices within each school's defined magnet theme will be used to inform instruction. In addition to the overall academic content areas, the five project magnet schools will focus on specific thematic instruction which will be prominent in the all aspects of each magnet school and will be the basis for the curriculum design for each school.

***Understanding by Design (UbD)*** All staff (teachers and administrators) in each of the five proposed magnet schools will participate in the ***Authentic Education's*** UbD training to deepen their understanding of curriculum design elements, and to relate these elements to the theme-specific, interdisciplinary, and challenging magnet curriculum to be effectively designed and implemented during the three years of the project. Authentic Education will provide follow-up training as well as sustained support over the course of the project, including feedback on designs-in-progress and model lessons, based on the magnet school teachers' own unit designs, to illustrate exemplary implementation. The curriculum specialist and the teachers in each school will work in teams to use the UbD Curriculum Framer to design and align new thematic units, based in UbD, and will work with their peers to develop, critique and refine the curriculum. The curriculum specialist will lead the teachers through the development of peer-reviewed rubrics which can be imported into the Framer. The UbD framework will help focus curriculum and teaching on the development and deepening of student understanding and transfer of learning through authentic performance. Regularly reviewing units and curriculum against design standards will enhance curricular quality and effectiveness, and provides engaging and professional discussions. The project's curriculum specialist and lead teacher from each magnet

school will participate in UbD “Train the Trainer” workshop to develop coaching skills and strengthen their ability to guide their colleagues to develop and deliver effective curriculum.

***Magnet Student Ambassadors*** – The Magnet Student Ambassadors will be organized in each of the five schools. The Lead Teacher will work with the ambassadors during school and after school. They will receive training in leadership skills, teambuilding, social etiquette, public speaking, and peer mediation. Their responsibilities include leading tours to show potential student/ parents and other visitors around the school and explain the magnet school’s innovative learning opportunities. They rotate in groups to greet parents and other guests at evening meetings, Open House, or student orientation visits. Ambassadors will have a professional dress code on days they are meeting visitors at the school, and will be expected to represent the best of the magnet school as a school leader at all times, during school events, formal or informal.

***1:1 Personal Digital Device Initiative***

In an effort to transform the classroom and school learning environment into a connected learning community, the SDPBC proposes to implement the 1:1 Personal Digital Device (PDD) initiative to distribute a PDD to every teacher and student in the five proposed magnet schools.

***Vision:*** By the end of the project, the robust technology environment will enable teachers to become knowledgeable, skilled, and creative in the use of the technology and digital content to produce engaging, relevant, and effective learning environments for all students. As a result, students will be fully engaged, leading to higher attendance rates, lower discipline rates, higher performance and academic achievement.

***Infrastructure:*** Due to the strategic direction of the IT Department over the last three years, a wireless umbrella is in place at every schools to facilitate the use of a wide assortment of

mobile computing devices. For this project, robust *wireless connectivity* is available throughout each of the five proposed magnet schools.

***District's Commitment:*** The SDPBC is committed to the success of this initiative. It is the first of its kind in the SDPBC, and District leadership is keenly aware that this is the wave of the future. The PDD's will be purchased through the grant and sustained by the District. The SDPBC will also provide the support for school personnel to be trained. Upon notification of funding, Mr. John Long will be assigned to the MSAP project on an in-kind basis to provide and facilitate all aspects of the initiative. Mr. Long is an educational technology specialist who is also a certified teacher with classroom teaching experience. He brings to the project a unique and formidable set of skills that together make up a powerful and comprehensive solution to support the teachers with technology integration strategies and pedagogy. His responsibilities will include facilitating and delivering professional development, working with teachers individually to enhancing their teaching with technology, evaluating and deploying digital curricular materials, planning, supervising, collect data for the project evaluation.

***The PDD:*** The district has evaluated a number of possible devices and determined that iPad technology will meet the needs of this project and can be supported and sustained by the District. All of the schools have the necessary wireless infrastructure. *The proposed magnet schools will be the first in the District and among the very few in the state to provide 1:1 PDDs with seamless wireless capabilities in the schools.*

***Teaching and Learning:*** The 1:1 PDD Initiative aims to transform teaching and learning in this schools. The introduction to anytime, anywhere computing in the school environment will impact each student's learning experiences in a powerful and complex way. As a result, it is anticipated that teaching will become more student-centered, and these schools will see an

overall increase in collaborative learning and project-based learning. Students work will become more personalized, as students will be able to do more work on their own, at their own pace, and teachers will be able to assume the role of learning facilitator or “guide on the side.” This will allow the teacher the flexibility to make individualized suggestions, mid-course corrections, and more frequent assessments of individual or group progress. Teachers will be able to provide more differentiated instruction, individualized pacing, and to provide timely feedback

The 1:1 PDD initiative will open up many more means by which teachers can focus on student acquisition of knowledge and skills; many more avenues for students to learn and engage than simply relying on traditional text; and many more ways for students to demonstrate what they know. Students will use their PDDs across curricular areas with readily available access to online resources. Students will be able to synthesize information and communicate what they have learned through unique digital and hands-on experiences to become knowledgeable, reflective, and responsible global citizens.

***Teacher Training:*** Given the amount of technology knowledge needed to fully integrate the PDD into the curriculum, the teachers will require professional development and technical support. Mr. Long will develop, implement, and coordinate multiple avenues of professional development for the teachers and staff, including: Online training anytime, anyplace will offer teachers with courses designed for them to learn at their own pace with lessons that target the instructional use of classroom technology; Training on Demand as needed or for direct, one-on-one instruction on any number of software and online tools and services; and Scheduled Trainings for the whole staff to be listed on each school’s master schedule of MSAP professional development throughout each year of the project. *(Please refer to section (b)(3) for a detailed timeline of the teacher training.)*

***PROJECT DESIGN: THE MAGNET SCHOOL PROGRAMS***

The MSAP Project Design is the product of a comprehensive planning process. Magnet school themes identified for strategically placed school locations will complement existing district magnet schools, offering students the opportunity to choose a K-12 magnet curriculum continuum. The themes are based upon themes in successful magnet schools in SDPBC and throughout the nation as both the STEAM and International Baccalaureate themes have been especially effective in raising student achievement while, at the same time, have proven to be powerfully attractive to the diverse populations of students who attend magnet schools by choice.

SCHOOLS	SCHOOL-WIDE MAGNET THEME
<b>Palmetto ES</b>	STEM Infused IB/PYP- <i>International Baccalaureate Primary Years Programme</i>
<b>Grove Park ES</b>	STEM Infused IB/PYP - <i>International Baccalaureate Primary Years Programme</i>
<b>Carver MS</b>	STEM-Infused IB/MYP - <i>International Baccalaureate Middle Years Programme</i>
<b>Watkins MS</b>	STEM-Infused IB/MYP - <i>International Baccalaureate Middle Years Programme</i>
<b>Congress MS</b>	STEAM Academy – <i>Science, Technology, Engineering, Arts, Mathematics</i>

All five magnet schools in this project are deeply rooted in the belief that students are natural inquirers and that inquiry is at the heart of all learning. As school-wide magnet programs, all students will be given the opportunity to experience active and engaging processes of learning related to the themes, representing interesting and rigorous curricula and approaches that motivate and inspire students to learn. Each program will seamlessly blend the program’s thematic focus with state standards to provide unique opportunities not available in traditional schools. Through extensive professional learning, teachers will learn to use effective teaching strategies with multimedia technologies to provide a challenging, interdisciplinary, standards-based curriculum that will meet the needs and interests of all magnet school students.

The following *Program Designs* each provide a program overview, major program strands, planned strategies and enrichment activities, professional development, assessment methods, and interactive learning centers. Thematic interactive learning environments will be structured for hands on, minds on teaching and learning to ensure that all students reach their optimum potential for learning. Each will be structured as a magnet school-wide design, and all students will be magnet students who participate in the exciting, thematic learning opportunities.

Four of the five magnet schools will offer programs of the *International Baccalaureate Organization (IBO)*, a non-profit educational foundation based in Geneva, Switzerland. The IBO is internationally recognized for its wealth of knowledge and experience and for its significant role in developing international educational models that combine the best of the research, practices, and philosophies of a range of global national systems across the world. The IBO offers the Primary Years Programme for students aged 3 to 12; the Middle Years Programme for students in the 11 – 16 age range; and the Diploma Programme for students in the final two years of school, aged 16 to 19.

***STEM-INFUSED INTERNATIONAL BACCALAUREATE PRIMARY YEARS PROGRAMME***  
**AT**  
**Palmetto Elementary School - West Palm Beach, Florida**  
**Grove Park Elementary School – Palm Beach Gardens, Florida**

*The future of the world hinges upon education to teach students  
to look beyond borders and develop increased cooperation among nations.*

*~The Primary Years Programme*

**Program Overview** The Primary Years Programme (PYP) is a program of the International Baccalaureate Organization (IBO). The proposed PYP magnet schools (Palmetto ES and Grove Park ES) will offer an international, transdisciplinary educational program designed to foster the

development of the whole child. The PYP is a comprehensive, balanced, inquiry-based approach to teaching and learning, coupled with challenging and varied assessments, to create a relevant, engaging framework for all children, and to teach them to relate their experiences to the realities of the world. Beyond intellectual rigor and high academic standards, strong emphasis will be on the ideals of internationalism and responsible citizenship, as PYP students strive to become critical, compassionate thinkers and lifelong learners, and to become conscious of the shared humanity of all people and committed to improving our world.

**Theme-Alike Magnet Schools** - The PYP is proposed for implementation in two magnet schools in geographic locations distant to one another, and in strategically-placed locations where the PYP implementation will form a K-12 IB Continuum with secondary schools located in the same region as these elementary schools. In the central region of the county, Palmetto Elementary IB/PYP will form an IB Continuum with Conniston Middle IB/MYP (established) and Forest Hill High IB/DP (established). In the north region of the county, Grove Park Elementary IB/PYP will form an IB Continuum with H.L. Watkins Middle IB/MYP (also proposed for MSAP funding in this proposal) and WT Dwyer High IB/DP (established). The two proposed PYP magnet schools will offer the world renowned-IB/PYP to all of its students, with performance-based inquiry to structure the teaching and learning, and with the opportunity to study Spanish as a world language. Over the past nine months, planning teams from each proposed magnet school met with the district's planning committee, along with an IBO trainer, to align the comprehensive three-year plan for successful implementation to meet 1) the timeline for training, activities, and budgets; 2) the MSAP goals and objectives; and 3) requirements for IBO authorization. Upon notification of funding, the Project Director will immediately notify the IBO that Palmetto and Grove Park will begin the process of developing and implementing

the PYP school-wide magnet schools. All teachers and staff in these schools will follow IBO guidelines, standards, and practices to ensure each school becomes authorized as an IBO World School by the end of the third year of the project.

***The PYP Curriculum Model*** - The PYP is a curriculum model of the IBO. The PYP offers a comprehensive approach to teaching and learning, with a complete curriculum model which incorporates guidelines on what students should learn, as well as guidelines on teaching methodologies and assessment strategies. This model is expressed through three interrelated components through which learners construct meaning: the *Written Curriculum*, the *Taught Curriculum*, and the *Learned Curriculum*. The two proposed PYP magnet schools are committed to providing a challenging, integrated, and relevant curriculum that prepares all students to be compassionate and ethical global citizens. At the two schools, teaching and learning will be guided by the PYP philosophy that promotes a learning environment where diverse students will develop a better understanding of and sensitivity to others, and by the PYP curriculum framework that enables children to construct meaning to learning while developing the concepts of internationalism and social responsibility. The PYP curriculum provides a framework within which the magnet schools will constitute the skills and knowledge as required by the Florida Standards and Grade Level Expectations.

***The PYP Transdisciplinary Themes*** - While the PYP emphasizes the importance of the acquisition of knowledge and skills in traditional subjects, it places equal importance on the need for interrelated knowledge and skills, to explore content that is relevant, to integrate subjects and make connections across the disciplines, and to foster the total growth of the developing child. The PYP has identified international transdisciplinary themes that have global significance and a common meaning in all cultures, and are part of the required ***Programme of Inquiry*** that unifies

the curriculum framework in PYP schools world-wide. Teachers and students are guided by these themes as they design curricular units for exploration and study. Students explore subject areas through these themes. In the process, students learn important concepts, acquire essential skills and knowledge, and learn to take socially responsible action. The Transdisciplinary Themes provide balance and meaning through integrated, relevant knowledge in context.

The *PYP Programme of Inquiry* provides the comprehensive framework for teaching and learning with a commitment to *Structured Inquiry* as the driving force for all learning within the PYP curriculum framework. Structured inquiry pervades every aspect of the curriculum, as planned and developed by the teachers, staff, and students, using open-ended questions to guide student learning. The IBO offers specific guidelines and support for teachers. IBO workshops and collaborative networking give teachers the opportunity to fully understand the philosophy and concepts within the PYP. The IBO provides a *Unit Planner* as a structured approach to collaborative planning. Overall, the PYP schools will provide the comprehensive, inquiry-based approach to teaching and learning, with opportunities for STEM learning and the use of personal digital devices and other technologies throughout; Spanish instruction for every child; community service opportunities; instruction in music, visual arts, and technology; independent research and cooperative team projects; internationalism; and alternative assessment strategies.

*Community and Service* - Students will be taught to reflect about what they have learned and choose a way to make the world a better place. Student action may take place in their school or community as a result of their learning, both socially and personally. Some IB-PYP student action projects already suggested for the students in the proposed PYP schools include beach clean-up days, school-wide recycling projects, food and supply collections, among others.

*Student assessment* is emphasized in the professional development, curriculum development, and throughout the teaching and learning. Through IBO workshops, teachers work collaboratively on model sample assessments, and use strategies appropriate to the needs of their students. Formative assessment is interwoven with daily learning, and helps teachers and students find out what they already know to plan the next stage of learning. The PYP promotes a range and balance of assessment and feedback techniques, including student-teacher-parent conferences, structured observations, writing samples, rubrics, checklists, anecdotal records, and performance tasks assessed by teachers and by the students themselves. Summative assessment occurs at the end and gives students opportunities to demonstrate what they have learned.

The *PYP Digital Portfolio*, a profile of student achievements and accomplishments, is an important documentation of the student's educational progress. The portfolio will be digitally maintained on the 1:1 PDDs. Students and teachers collaborate on portfolio selections, which may be work sampling, student self-assessment, extracurricular achievements or other student activities. The PYP Digital Portfolio assesses the extent to which the central idea/concept has been learned. Through a process of collaboration, PYP teachers will constantly assess the success of their own teaching and facilitating of student learning.

*IB Internationalism* will increase the PYP students' knowledge of the world and its cultures, increase collaboration and dialogue among students of different backgrounds, highlight critical world issues that demonstrate interconnectedness and challenges we face as global citizens (such as disease, global warming, poverty, war, global terrorism), offer students a tangible taste of foreign places that they might never have the opportunity to visit on their own, create informed and culturally aware citizens of the world, and provide an educational framework in which students become active in their own learning.

The *Primary Years Program Exhibition* is an important part of the PYP for all students. In the 5<sup>th</sup> grade, all students undertake a collaborative, transdisciplinary inquiry process that involves them identifying, investigating, and offering solutions to real-life issues or problems. As the culminating experience of the PYP, the Exhibition offers students an exciting opportunity to demonstrate independence and responsibility for their own learning.

***INFUSION OF STEM INTO THE PRIMARY YEARS PROGRAMME***

Through this project, students will have daily opportunities to become actively involved in STEM learning and science discovery. STEM will be infused into the PYP at Palmetto and Grove Park through teacher-designed units of inquiry that will purposely allow for the integration of *math, science, technology, engineering* and authentic STEM learning, engaging students in inquiry based learning with links to real world context. Additionally, the *AIMS integrated STEM modules* curriculum, developed with National Science Foundation, will be used. AIMS is based in research and is aligned with Florida standards. Also, the GEMS integrated STEM modules, aligned with state standards, will be implemented, including the research-based *GEMS Space Science*. Through this MSAP grant, a STEM Investigation and Discovery Center will be established in every classroom to enrich science inquiry, investigations, explorations and discoveries with inquiry-based materials that teach and reinforce STEM learning for students, including to use their PDDs to conduct digital science experiments aligned to their IB themes and digital microscopes to create projects for their digital learning portfolios. The Outside STEM Learning Lab will include a nature trail and a weather station for students to engage in STEM learning through hands-on discovery of nature. Further reinforcing the infusion of STEM into the PYP will be the Lego WeDo RoboLab, in which science, technology, engineering, mathematics, and coding will come to life and students get

involved in scientific discovery and design their own prototype solutions. Annual events will include family Fun With STEM Night, to be hosted at the school three times per year by the South Florida Science Center. The students will engage in *STEM competitions* to give them engaging and multiple opportunities to develop skills beyond the classroom, to showcase work for the community, to develop pride in the school, and garner positive press. The phased-in implementation of 1:1 PDD learning with technology will focus on students developing skills necessary for them to learn whatever they need to learn, wherever and whenever they need to learn it. The technology will be the tool for learning, while the focus will be on curriculum.

***PYP INTERACTIVE LEARNING CENTERS –***

***United Nations Assembly Learning Center*** will be established in each proposed PYP school with an international center for student leadership conferences, PYP exhibitions, project displays, student-led conferences, parent-student workshops, authentic cultural artifacts, a wall-sized world map, international clocks to support units of inquiry. The international school theme will carry through the school with the Hallway of Flags, multicultural books, international time-zone clocks in various learning centers, current world globes in each classroom, and an educationally graphic Geochron Global Time Wall Clock within the media center of each school, showing real-time daylight and darkness over the globe. This technologically unique clock will continually remind global students of their place and time in the world and how time zones affect daylight and darkness. Internationalism is enhanced by the IB Internationalism Teacher Training.

***Multimedia Language LearningLab*** All students at the PYP schools will actively engage in the study of a second language. The language lab will be equipped Rosetta Stone software, a TV, ear buds, DVDs and CDs, sound system with speakers, multimedia equipment, and accessories including AV equipment, screen, projector, digital voice recorders, and microphones. The

World language teacher will collaborate with all classroom teachers to prepare common foreign language phrases for daily use in classrooms and in other school activities.

*Classroom Science Discovery and Investigation Centers* will be grade appropriately designed for each classroom in each proposed PYP magnet school, with supplies and other resources to enrich science inquiries, investigations, explorations and discoveries. Science centers will also be provided with science games, kits, inquiry-based materials, software, micro-mobles, and science and math manipulatives. Students in the intermediate classroom science centers will also explore and discover ---with sensors and probes, and appropriate software.

*RoboLab – LEGO WeDo Robotics* will bring STEM learning directly into the students' hands as they explore a series of cross-curricular, theme-based activities through building and programming models with motors and sensors. WeDo makes science, technology, engineering, mathematics, and coding come to life as the students get involved in scientific discovery and learn to define problems, gather evidence, carry out investigations, and design their own prototype solutions. Students will engage in science and computing, experimentation and investigation in activities that improve communication, collaboration, and team building skills.

*Junior Great Books* - The enriched literature to be integrated into the PYP reading at each grade level will be the quality, authentic Junior Great Books inquiry-based and award-winning classics. The *Junior Great Books* program incorporates reading, writing, and discussion activities using the shared inquiry method, and is noted for its 1) literature by some of the world's greatest classic and contemporary authors, 2) inquiry-based model of collaborative learning, and 3) *professional development modules* that support teachers in their development of authentic inquiry-based classroom and interdisciplinary units. The Junior Great Books are aligned with the

PYP and the shared inquiry method develops critical thinking, cross-disciplinary connections, and greater global perspectives and understandings.

The ***PYP Library*** will give the students, teachers, and their families access to the world's largest online repository of authentic IB aligned and curated E-books and materials. It will include an extensive collection of IB Teacher-generated lesson plans, promote reflection, action, and global collaboration via the Connect & Collaborate link on Inquiry Connection.com. It will support an interactive online community of students, parents, teachers and schools connecting with each other from around the globe.

***Interactive Video Initiative*** will be a learning element of the United Nations learning center, and will bring international cultures to students in a real-life way. Each school will develop PYP partnership schools to communicate about similarities and differences, and videoconferencing will bring young people face-to-face to meet across cultural and national boundaries to discuss issues of similar interest, differences, and the world issues that affect them. Videoconferencing will also bring professionals in to demonstrate their expertise, and teachers from around the world. This technology-enhanced interactive conferencing will enhance students' social interaction, self-expression, and other communication skills, as well as provide opportunities for deep reflection and memorable learning experiences. Students will be active learners.

The ***Learning Across the World Mural*** will be designed and painted in collaboration with the students and teachers at each PYP school (Palmetto and Grove Park). The mural project at each school, to be developed with a professional artist, will be an interdisciplinary visual arts and mathematics project with hands-on applications. The student-designed project will feature artistic images of multicultural children actively engaged in learning experiences in settings throughout the world. It will depict the commonalities of learning in an international perspective.

The *Learning Across the World* Mural will be located in a focal point of each proposed PYP school as a point of pride for students and teachers who will be directly involved in every aspect of the process. This activity will be real-world relevant to the students.

***PRIMARY YEARS PROGRAMME TRAINING FOR IBO AUTHORIZATION***

At both PYP schools, all teachers and administrators will participate in IBO-authorized training to implement the PYP, to develop the units of inquiry, and to participate in all activities required for IBO school authorization. IB training will involve a combination of activities, including leadership meetings, national conferences, on-line training, and on-site training. Each year will start with the principal, lead teacher, and team attending a leadership training, and bringing the information back to the faculty. Following that, the entire staff will attend on-site training by authorized IB trainers through a blended delivery (face-to-face and online) each year of the project. In year one, all teachers and staff will engage in *Category 1: "Making the PYP Happen in the Classroom"* on PYP international-mindedness, IB standards and practices, and the PYP written, learned and assessed curriculum including the essential elements of knowledge, concepts, transdisciplinary skills, attitudes, and action. How this translates into creation of a Programme of Inquiry is a focus. In Year Two, the administrators' regional training is Category 2: "The Written Curriculum" which focuses on the Programme of Inquiry, unit planners and scope and sequence documents, as well as key concepts and curriculum mapping techniques. The on-site year two training for everyone is *Category 2: "Assessment in the PYP"* which explores assessment practices, record keeping, communication, and school-wide policy development. In Year Three: the administrators' training is *Category 3: "Creating Inclusive Classrooms: Access for all students in the PYP"* and the onsite training for everyone is *Category 3: "Teaching Science and Social Studies in the PYP"*.

***Concept-Based Curriculum and Instruction*** - Global Education Advisors (GEA), consultants with IB and STEM expertise, will provide professional development and follow up support for each of the four PYP and MYP schools during all three years of the project. All teachers will participate in a two-day interactive learning institute connected to IB philosophy and pedagogy each year, followed by two days of onsite coaching and collaborative planning support. During year one, the *Concept-Based Curriculum and Instruction Learning Institute* leaves the design of curriculum and instruction to teachers, but informs and reinforces quality curriculum design and pedagogy. In year two, the *Inquiry-based Teaching & Learning Institute* will explore strategies for assessing student learning when using inquiry-based approaches and engage in activities that illuminate the strong learning connections between curriculum, learning standards and inquiry-based instruction. In year three, the *Affective Skills, Social/Emotional Learning, and Well-being Learning Institute* will explore research and benefits of mindfulness, positive psychology and social-emotional learning as a framework for creating positive, supportive and responsive learning environments. Participants will engage in hands-on activities and strategies designed to cultivate mindful awareness, resiliency and caring for self and others.

***Palm Beach Zoo and Conservation Society- Professional Development and Field Trip***

Each of the three years of the project, all PYP teachers will meet at the Palm Beach Zoo for one full day each summer to participate in hands-on STEM activities as they tour the entire zoo. The Zoo Education Director will facilitate a session with the teachers to create lesson plans based on their zoo experiences. The Education Director will also share lesson plans that she has created for the teachers to use with their students. All students in the PYP schools will participate in one in-school field trip each year with hands-on STEM activities and live animals. Among the topics are: Animal Habitats, Animal Adaptations, and STEM Careers at the zoo. (*The Palm Beach Zoo and Conservation Society will replicate these activities for all five proposed schools.*)

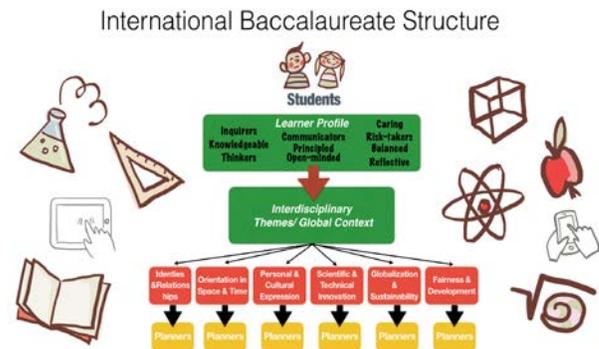
**STEM-INFUSED INTERNATIONAL BACCALAUREATE MIDDLE YEARS PROGRAMME**

AT

**Carver Middle School - Delray Beach, Florida****Howell L. Watkins Middle School – Palm Beach Gardens, Florida**

**Program Overview** - Carver Middle School and H.L. Watkins Middle will be transformed from traditional middle schools to school-wide magnet schools, grades 6 – 8, offering the Middle Years Programme (MYP) of the International Baccalaureate (IB) to a ll students at the schools.

As the magnets are implemented and recruitment occurs, the populations at these schools will become increasingly more diversified. In the MYP, the different backgrounds, languages, cultures, and contributions of the students will be celebrated with a focus on internationalism.



**Theme-Alike Magnet Schools**– The MYP is proposed for implementation in two magnet schools in geographic locations distant to one another, and in strategically-placed locations where the MYP implementation will form a K-12 IB Continuum with an elementary IB and high school IB located in the same region as these schools. In the south region of the county, Carver Middle IB/MYP will form an IB Continuum with Morikami Elementary IB/PYP (established) and Atlantic High IB/DP (established). In the north region of the county, H.L. Watkins will form an IB Continuum with Grove Park Elementary IB/PYP (proposed for funding in the proposal) and WT Dwyer High IB/DP (established). Over the past nine months, planning teams from each proposed magnet school met with the district’s planning committee, along with an IBO trainer, to align the comprehensive three-year plan for successful implementation to meet 1) the timeline for training, activities, and budgets; 2) the MSAP goals and objectives; and 3) requirements for

IBO authorization. Upon notification of funding, the Project Director will immediately notify the IBO that Carver and Watkins will undergo all IBO requirements to become authorized to offer the MYP. All teachers and staff in these schools will follow IBO guidelines, standards, and practices to ensure each school becomes authorized as an IBO World School by the end of the third year of the project.

***The MYP Curriculum Model*** The MYP will provide the *framework for learning* that will encourage students to become creative, critical and reflective thinkers. The MYP emphasizes intellectual challenge, intercultural understanding and global engagement, qualities that are essential for life in the 21st century. The MYP addresses students' intellectual, social, emotional and physical well-being, enables students to manage the complexities of our world, provides them with the skills and attitudes they need to take responsible action for the future, and ensures the breadth and depth of knowledge and understanding through the study of eight subject areas: Language and Literature, Individuals and Societies, Mathematics, Design, Arts, Sciences, Physical and Health Education, and Language Acquisition. MYP students must study a World Language each year, and the language to be offered at both Watkins and Carver is Spanish. The areas of interaction are constant throughout the course of the MYP and the eight subject groups, but also through interdisciplinary teaching and projects, whole school activities, and the culminating capstone activity. MYP Interdisciplinary Learning supports MYP students to understand bodies of knowledge from two or more disciplines to integrate them and create new understandings. Each year, MYP schools are responsible for engaging students in collaboratively planned interdisciplinary units that involve at least two subject groups.

***MYP Student Assessment*** With consistent MYP training, the teachers will develop authentic assessment strategies that are criterion referenced and provide many avenues for

students to demonstrate mastery. The MYP *digital portfolio* will be a crucial assessment tool for all students. Curriculum and instruction will be aligned with state standards as well as the international standards of the IBO to measure student success and guide future curriculum and lesson planning. Students will understand the difference between formative and summative assessment. The vital element of self-reflection will be the standard in the assessment process. The culmination of this self-reflection comes with regular *Student-Led Conferences*, where the students lead parents through their digital portfolio, pointing out the successes and struggles so they can plan together a path to success in the coming months. Teachers and staff use assessment data to inform instruction. The Lead Teacher will meet with all grade level teams to pull together the support of the teachers, parents, and students, to look in-depth at performance data to design instructional strategies to assist struggling students. As needed, these teams will also bring in special education teachers, counselors, or administrators to plan necessary interventions.

***IB Internationalism*** – A major focus in the MYP theme is internationalism, enhanced by opportunities for multicultural learning and learning a second language. Students will increase their knowledge of the world and its peoples; use the internet to make connections with students in MYP schools throughout the world; focus dialogue and debate on critical world issues that demonstrate interconnectedness and challenges we face as global citizens; become informed and culturally aware citizens of the world; and study in the MYP educational framework in which students become active in their own learning.

***Digital student portfolios*** will offer an effective approach to student assessment that documents the manner and extent to which the magnet school is increasing student performance in academics, as well as in the overall magnet theme. Student progress will be demonstrated in

multiple ways. Students will be given constant feedback about their growth and academic performance and will be assessed against benchmarks and standards.

The *Capstone Project* is a culminating project for eighth grade students, and is a direct result of the student's MYP learning experiences. The Capstone will engage students in inquiry and will reflect the student's creativity and interest. The lead teacher will serve as advisor to the student during the development of the capstone project, which may be focused on an Area of Interaction (the environment, for instance), or it may be a product of interdisciplinary research and discovery learning in response to a student-posed inquiry. Students will display, present, or perform capstone projects during the *Showcase of Learning* for invited guests and parents,

#### ***MYP INTERACTIVE LEARNING CENTERS***

***Science Discovery Lab*** - MYP students are required to participate in science lab learning. Both Watkins and Carver will need new resources for the lab. These will support National Science Education Standards, and will allow teachers to provide differentiated and learning extension activities. The lab will emphasize hands-on, minds-on interdisciplinary exploration using science integration applications, manipulatives, experiment books/manuals, anatomical models, human cell models, experiment supplies, probeware, interfaces, sensors, software, video analysis capture tools, motion detectors, monitors, conductivity devices, graphing calculators, software updates, and supplies for experiments in biology, chemistry, physics, earth science, physical science, life science, and comprehensive science.

***Theme Immersion*** will emphasize internationalism, which will be enhanced by growing diversity of students, learning a second language, and interactive video conferencing. Each school will have a Hallway of International Flags, international time-zone clock, a teaching and learning hands-on wall mural with an international theme, a wall-sized international map, and an

educationally graphic Geochron Global Time Wall Clock to show real-time daylight and darkness over the globe as a reminder to students of their place and time in the world and how time zones affect daylight and darkness.

The ***Multimedia Language Learning Lab*** will provide a supportive, interactive language learning lab for students to actively engage in learning Spanish and other World Languages, taking advantage of technological advances in language instruction by providing a multimedia environment to enhance language competence and offer online language learning courses. This lab will be the Hub of global learning in the school, as globally competent students will engage in learning experiences that will lead to a broader and deeper appreciation of both language and culture, to develop a diverse and knowledgeable worldview, to learn to communicate in another language and/or cross-culturally, and to exhibit cross-cultural sensitivity and adaptability.

***Outdoor Global Environmental Learning Center*** – This learning center is designed to take scientific explorations into the real world for MYP student global scientists to inquire, explore, investigate, discover, and document results. With a research-quality weather station, wind tunnel, an authentic nature trail, and a greenhouse, students will have many opportunities to learn and participate in interdisciplinary investigations that include hands-on, minds-on learning activities to understand cycles and habitats of nature, using a variety of handheld technology and graphing calculators to perform authentic experiments and download/collect data for spreadsheets and charts. Students will participate in studies in the fields of horticulture, meteorology, oceanography, sociology, geology, geography, aquaponics, hydroponics, etc. They will forecast weather events, including storms and hurricanes, and make daily predictions via the school-wide TV broadcast studio. They will use technology/data collection devices to experiment and draw conclusions about plants, sun, sky, clouds, seasons, weather, and wind. Overall, they will inquire

and explore with critical thinking/problem solving; collaborative learning; and link to educational standards. The *Nature Trail* will have a walkway, bird blind, wildflower gardens, plants, learning stations, materials, and outdoor classroom furnished with hands-on, motivational discovery centers to foster creativity and motivate environmental inquiry, experimentation, and discovery. *Weather Station* will have a wind tunnel and students will use connected software to collect data and conduct investigations to track, experiment, simulate patterns, discover and forecast; broadcast forecasts daily on school's TV broadcast facility.

***Robolab - LEGO MINDSTORMS Robotics*** uses educational software to develop basic computer programming, robotics and automation skills. Students will engage in hands-on, project-based STEM learning using innovative, engaging robotics solutions. Using LEGO Mindstorms, students will design, build, program, and test robots that can complete complex tasks, record live data, respond to environmental changes, and more. They will carry out simple investigations, calculating and measuring behaviors, and recording and presenting their results. Students will work in small groups on engaging, hands-on, problem-based tasks.

***Interactive Video Initiative*** will be a component of the United Nations learning center, and will bring international cultures to students in a real-life way. Each school will develop IB-network partnership schools to communicate about similarities and differences, and videoconferencing will bring young people face-to-face to meet across cultural and national boundaries to discuss issues of similar interest, differences, and the world issues that affect them. Interactive video will also bring professionals in to demonstrate their expertise, and teachers from around the world.

***The Internationalism Mural*** will be designed and painted in collaboration with the students and teachers at each MYP Middle School. This mural, to be developed with technical

assistance from a professional artist, will be an interdisciplinary visual arts and mathematics project with hands-on applications and will feature artistic images of multicultural young people actively involved in an array of learning experiences in settings throughout the world. It will depict the commonalities of student learning in an international perspective.

***INFUSION OF STEM INTO THE MIDDLE YEARS PROGRAMME***

To infuse STEM into the MYP, the teacher-designed units will reflect an interdisciplinary approach to learning where rigorous academic concepts are coupled with real-world lessons as students apply science, technology, engineering, and mathematics in contexts to make connections in their learning and understanding. Through this project, students will have daily opportunities to become actively involved in STEM learning and science discovery. STEM will be infused into the MYP at Carver and H.L. Watkins as the teachers design units that include logical and relevant connections to STEM fields, purposely integrate the STEM disciplines, and engage authentic STEM learning for students with links to real world contexts.

For each MYP school, this project proposes to establish Outside Global STEM Learning Labs that will foster hands-on, inquiry-based learning as students interact with their surroundings in the environment. Students will have the opportunity to engage in long term observation and learn how their activities affect the environment. Students will study natural cycles, collect soil or water samples, observe and collect data about weather patterns, and measure temperature, barometric pressure, wind-speed, direction, etc. They will be able to use their PDDs to keep digital charts, graphs, and observation logs in their digital journals. They can apply these observations to draw conclusions and make predictions. This outdoor STEM learning will stimulate critical thinking skills, imagination and creativity, and foster the use of systems thinking, emphasizing the interconnectedness of all things.

Additionally, each MYP school will have the Lego Mindstorms Robolab in which students will also use scientific observation, discovery, and reasoning as they develop computer programming, robotics and automation skills.

Each MYP school will also sponsor a SECME (Science, Engineering, Communications, and Mathematics Enrichment) Club which connects students to STEM concepts with team engineering design challenges and STEM research. Students will be encouraged to join (particularly girls) the SECME club for fun and for preparation to compete, but individually and as part of the school team, in SECME team engineering design competitions with other schools in the county, state, or nationally. *(The District will provide activity buses for magnet students involved in extracurricular activities.)* These are a few examples of STEM-infusion in which students will learn new content to apply it to real world contexts

***MIDDLE YEARS PROGRAMME TRAINING FOR IBO AUTHORIZATION***

All teachers at Watkins and Carver will develop their expertise in the MYP program through consistent, informed professional development, aligned with the MYP mission, and focused on the MYP curriculum and instructional strategies within and across the eight required subject groups. The MYP depends on knowledgeable, dynamic, and innovative teaching. This IBO-approved training is aligned with the MYP authorization requirements.

Each year of the grant, the Lead teacher, STEM Coach, the MYP school Principal or Assistant Principal, and other staff members will attend two and one half days of MYP face to face regional training (15 hours). They will then present this information to the staff. In Year 1, the entire staff will participate in a six hour mandatory onsite training by authorized IB trainers. In Years 2 and 3, all staff members along with the Lead teacher, STEM Coach, and one

administrator will attend onsite training by authorized IB trainers with a blended delivery (12 hours face to face and a 3 hour pre-workshop online component).

In Year One, all administrators and members of the teaching staff, including specialists, will attend a one day (six hours) mandatory "Launching the MYP" in-school workshop. This workshop provides MYP schools with a consistent knowledge base across all staff and acts as a specific launch point for MYP practice. This workshop explains the philosophy and pedagogy of the Middle Years Programme expressed in the IB MYP Standards and Practices. The connections of the learner profile infusion and the international mindedness philosophy will be explored along with inquiry and concept based teaching and learning strategies and an interdisciplinary curriculum.

Also in Year One, the Lead teacher, STEM Coach, two Spanish teachers, one administrator, ten teachers and staff representing all grade levels and electives will attend Category 1 "Implementing the MYP Curriculum" training. The Lead teacher and school administrator will attend Category 1 "Implementing the MYP Curriculum: Heads of School and MYP Coordinators". They will learn about transforming teaching, learning, and assessment practices through a concept based curriculum that promotes inquiry, action, and reflection in global contexts. Participants will explore the philosophical, pedagogical and administrative implications of the IB programme to assist them as they prepare for the verification visit. The other staff members will attend the Implementing the MYP Curriculum for their subject disciplines. They will develop an understanding of the structures and principles of the MYP subject group framework and guidelines. They will then use the "train the trainer" model to train remaining staff upon their return.

In Year Two, the Lead teacher, STEM Coach, one teacher from each grade level, and one school administrator will attend Category 2: Heads of School/MYP Coordinators "Delivering the MYP Curriculum" regional training. Participants will collaborate and reflect on leadership strategies to enhance the ongoing implementation of the programme by all members of the school community. They will focus on the alignment of educational beliefs and values to reflect those of the IB in order to create a challenging programme of international education in preparation for Application for Authorization (verification visit.) Also in Year Two, all teachers plus the Lead teacher, STEM Coach, and one administrator (total of 62) will attend onsite training for specific subject disciplines: Category 2: "Delivering the MYP Curriculum." They will further develop an understanding of the structures and principles of the MYP subject group framework and guidelines and how these are translated into MYP units.

In Year Three, the Lead teacher, STEM Coach, one administrator, and one Spanish teacher will attend Category 3: "Global Contexts for Teaching and Learning" regional training. Participants will discuss the importance of globally relevant contexts for promoting student inquiry, responsible action and critical reflection in a rapidly-changing world. Additionally, the workshop will explore an array of strategies and resources to create teaching and learning communities in which students can increase their understanding of languages and cultures in engaging settings. Also in Year Three, all teachers plus the Lead teacher, STEM Coach, and administrators (total of 62) will attend onsite training Category 3: "Interdisciplinary Teaching and Learning in the MYP". The workshop will provide background knowledge of the MYP, including the philosophy and principles of interdisciplinary unit planning. Participants will gain a deeper understanding of the theory of interdisciplinarity and adopt a hands-on approach to developing an interdisciplinary unit of work within a group.

\*\*Louis Marchesano, an authorized IB trainer and independent consultant, will provide training for all staff for two days each Fall and two days each Spring. He will focus on unit planning, aligning units with Florida State Standards, and creating authentic assessments. Visits include face to face presentations and working with grade level teams to write units.

**THE STEAM ACADEMY**  
**(SCIENCE, TECHNOLOGY, ENGINEERING, ARTS, AND MATHEMATICS)**  
**AT**  
**Congress Middle School - Boynton Beach, Florida**

*“It is the tension between creativity and skepticism  
that has produced the stunning unexpected findings of science.”*

~ Carl Sagan

**Program Overview**

The proposed STEAM Academy will transform the traditional middle school into new, school wide magnet program where all will be STEAM magnet students, where teaching and learning opportunities will go well beyond what is found at a traditional school. The STEAM Academy magnet school will offer a learning environment where teachers have high standards and high expectations for all students. Students will be engaged in a dynamic, technology rich, project-based learning, in a rigorous curriculum, designed to stimulate potential, interest, and artistic creativity, while simultaneously promoting academic achievement through the study of STEM disciplines. Preparing students for success in the 21st century will require a shift in the learning environment to one which fosters student experimentation, exploration and peer interaction. Offering students choice and autonomy in learning within an environment that meets individual students’ needs will be a priority.

The STEAM Academy will move from the teacher-centered instructional model to one in which teachers, in a collaborative learning culture, will be willing to be learners as well as guides of learning, in which students and teachers in a learning community work together to enhance and amplify each other's learning. This represents a paradigm shift from traditional educational philosophy, based on standardized test scores, to a modern ideal which focuses on valuing the learning process as much as the results. The STEAM learning environment will be creatively transformed and shaped by a vision for the future of learning.

The magnet school will offer a rigorous, interdisciplinary curriculum, using project based learning study of Science, Technology, Engineering, Arts, and Mathematics. *STEAM is the framework for teaching across academic disciplines*, using project based learning and inquiry to creatively engage students in scientific discovery, and technological innovations through original, creative, and critical thinking. The STEAM magnet school will be an exciting place to learn, with a rigorous and relevant cross-disciplinary approach that integrates academic and experiential learning, focusing on complex problem solving and critical thinking skills. STEAM is designed to increase the intrinsic learning motivation of students, thereby improving academic performance and engagement.

The STEAM Academy will make innovative, engaging, rigorous education available to all students at all levels. It will facilitate a deeper conceptual understanding of the material in a meaningful way. STEAM, delivered through instructional methods like Project-Based Learning and Design Thinking, will allow students to apply their knowledge to create solutions for real-world situations. Students will be able to pull together information they have learned across the STEAM disciplines in one meaningful inquiry-based project. The goal for all Congress Students is to be able to communicate effectively, work collaboratively, think critically (both in terms of

evaluating media and information as well as problem-solving), and use innovative and creative approaches to solve the problems of today.

The Congress STEAM Academy magnet students will be excited about learning. They will learn from each other, from the teacher as facilitator, and from the exposure to a world beyond their walls through technology. Students will be daily motivated to connect with others around them. Students will be empowered to learn academic content and practice 21st century skills like collaboration, communication and critical thinking. They will create high-quality, authentic products and presentations. They will be measured by their ability to analyze, create and collaborate. They will see the value of 21st century skills in a technology-centered world.

The *Engineering* Curriculum is an essential component of the STEAM curriculum, offered to students on multiple levels through research-based, age-appropriate programs that will engage students in activities, projects, and problem-based learning, through hands-on classroom experiences. The students create, design, build, discover, and collaborate while applying critical thinking, creativity, innovation, and real world problem solving, as well as transference of knowledge/skills learned in math, science, and other subjects.

*Project Based Learning (PBL)* is a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an engaging and complex question, problem, or challenge. PBL is the instructional approach that will pervade all areas of learning in the STEAM magnet schools. The key is to coordinate this project-based approach with meaningful teaching and learning within and across the content areas. Hands-on, interactive strategies that are relevant and meaningful will be planned as one strategy to meet the academic needs of students who come from a variety of backgrounds.

The magnet school curricula will incorporate interdisciplinary student projects to fuse the disciplines and make teaching relevant and learning applicable to real life problems and challenges. As STEAM focuses on integration of content, pairing STEAM with PBL can target not only STEAM content, but also content outside of the core STEAM subjects. English can be integrated, as well as foreign languages and social studies. As STEAM and PBL continue to grow in implementation, teachers can fit them together in curriculum and instructional practice. PBL will improve students' understanding of the disciplines, as well as their problem-solving and collaboration skills, and they will be more engaged and motivated to learn. PBL will be the biggest component of STEAM, and more engaging to students because of its interdisciplinary content. Teachers will work in cross curricular teams to create large thematic concept units of PBL.

The Buck Institute for Education (BIE) Coaches will train all Congress teachers on how to design, assess, and manage projects that engage and motivate students with Project Based Learning as an instructional practice. The three-year systemic training program will bring coherence to PBL practices across grade levels and subject areas, and will lay the foundation for the school-wide processes and structures to support PBL.

*The STEAM Academy's College-Going Culture* -To create a school-wide college-going culture, a large-scale change in attitude must take place to shift the focus from a culture that has been primarily concerned with passing courses and passing standardized tests, to one that creates a culture of high expectations for each student's future. This college-going culture will build expectations for college attendance as the assumed "next step" for all students after graduation. Postsecondary education will become the standard expectation for all students, rather than the exception. All students will be encouraged and supported by their teachers and counselors to set

and achieve high goals, enroll in challenging coursework, and cultivate the drive to set high goals and reach for them. In the college-going culture, teachers, families, and students themselves will set high expectations for all students to be college-going, not just the “best” or the “better off” students. The dedicated teams of educators in the STEAM Academy will set the tone for college-expectations and will work daily to motivate and inspire their students to set high goals beyond high school and to begin now, in middle school, to achieve them. The STEAM Academy will visually adopt the college-friendly environment with college posters and pennants displayed, college web-sites bookmarked, and every teacher’s door will have a sign with the teacher’s name, college attended, and degree earned.

The STEAM magnet school will continuously build partnerships with the community, businesses, postsecondary institutions, and research institutions to create opportunities for students and teachers to participate in authentic STEAM experiences. Project-based learning will help connect schoolwork with the work of professionals, and these interdisciplinary connections will be made further transparent through professional mentoring as well as internship and service-learning experiences. Professionals from STEAM fields will be guest speakers to explain what they do and the companies with whom they work. Field trips will also be scheduled to provide students the opportunity to see real world connections to their studies.

The *Advancement Via Individual Determination (AVID)* college readiness system is designed to increase the number of students who enroll in and complete four-year colleges. The implementation of the AVID system will positively impact the academic, college-going culture of the STEAM Academy, and will give life to an explicit belief system that low income and minority students CAN and DO achieve at high levels and succeed in college. This philosophical underpinning and the success of AVID will help to change the expectations that far too many

teachers and students have of disadvantaged and underachieving racial, ethnic and linguistic minority students. Through AVID, underachieving students will be accelerated into more rigorous courses with AVID's intensive support system for students to succeed in these rigorous courses. Additional support will be structured into the academic AVID elective, and students will apply AVID study methods in every class. Content area teachers will be trained to use AVID methodologies that meet the learning needs of a broad range of students in rigorous content classes, using collegial practices such as Socratic methods and inquiry-based collaborative study groups that help students become independent learners. To ensure student success, the STEAM Academy will form an interdisciplinary team of content-area teachers, counselors and administrators to lead the implementation of the AVID. *Intensive professional development will be provided to school team members, including the AVID Summer Institute, as well as site-based training, online seminars, and sustained monitoring and coaching.*

***The 'A' in STEAM*** - STEAM is an approach which blends STEM and the arts to foster richer student learning. The theory behind moving from STEM to STEAM is that adding 'arts' to the critical components of STEM is a way of integrating creativity and artistic skills into the learning processes across the content areas. To bring this theory to the classroom, academic teachers and arts teachers will collaborate to integrate instruction. All students will develop an understanding of the significance of the arts as they acquire knowledge and understanding of core academic subjects and standards. Arts will be infused throughout the academic areas and the ways in which students express themselves and their learning, with creativity, expression, performance, drawing, music, or media arts. Teachers will learn to incorporate the arts into thematic units of inquiry. These components will foster literacy, imagination, competency, and creativity in a thematic arts environment conducive to high achievement and cultivation of the whole students.

The the project's partnership with the Kravis Center for Performing Arts, the project will contract with the Kennedy Center for the Performing Arts to bring their Changing Education Through the Arts (CETA) to the STEAM Academy, and the curricular redesign will focus on arts throughout the curriculum using project –based learning as the primary tool for learning.

*Artists in Residence* - Throughout the STEAM magnet school, professional working artists will work will students to provide instruction in arts disciplines, and these artists will work collaboratively with academic and elective teachers to familiarize them with the process of arts integrated into the curriculum. Classroom teachers and arts teachers will participate in training in the use of the arts as a vehicle to teach academic content and standards. The integrated arts curriculum will encourage creativity and self-expression in academic presentations.

*Boca Raton Museum of Art (BRMA)* will provide extensive differentiated professional development for all administrators and teachers in Visual Arts integration throughout the curriculum at Congress Middle School to support the STEAM focus. In Year 1, teachers are invited to receive guided tours of the museum free of charge two times and are given access to lesson plans. Museum staff will come to the school to present portrait art and its connections to all subject disciplines. In Years 2 and 3, the museum will provide three 2-hour professional development sessions four times a year. The three sessions are designed to focus on arts integration from the lens of specific subject disciplines: 1) English Language Arts and Social Studies, 2) Math, and 3) Science. In Years 2 and 3, all students will participate in an extended museum field trip (a total of six field trips planned for the school). The museum will provide pre-visit instruction utilizing lesson plans developed by BRMA and post visit lesson plans are also provided. The students will participate in hands-on art experiences while at the BRMA. The museum staff will also visit the school three days during Year 2 and three days

during Year 3 (one grade level a day). The staff will model a 20 minute lesson for students and teachers and provide post-visit instructions with lesson plans provided by BRMA. The museum will pay for all of the art supplies used. The BRMA will host one student art exhibition each year with families invited to attend.

The *digital student portfolios*, a documentation of student work and reflections of that work, will serve as a measure of student accomplishment and growth; complement traditional and performance-based assessment; and provide a multi-dimensional collection of student ability, potential, and progress. Instructionally relevant to the STEAM Academy magnet school, the student portfolio will contain performance assessment components that involve the student, the teacher, and parents in the processes of assessment.

*STEAM Capstone Projects* - The interdisciplinary capstone projects will blend science, technology, language arts, social studies, fine arts, engineering, and math, and will be designed to transcend in-school and out-of-school environments. The student projects will resemble real life, and will help make school work more relevant to students' lives, as well as more transparently linked to the skills needed to succeed in the working world. Students will work in a team on capstone projects, whether designing bridges or building robots, exploring health and wellness or sustainable living with green designs, or constructing an instrument or an amplifier to perform original music. Capstone project will begin with learning objectives – related to common core or state standards.

*Annual STEAM Showcase* Each year, students will exhibit their learning through multiple formats and in multiple settings including portfolios, exhibitions, experimentation, and performances, demonstrations, and 8<sup>th</sup> grade Capstone Projects. STEAM students will engage in

Capstone Projects through interdisciplinary project based learning to exhibit their learning through multiple formats.

*STEAM Professional Development* will be ongoing and extensive throughout the project, including an annual seven day summer institute for all teachers and staff, weekly professional learning communities, district-funded professional learning days quarterly, grant-funded Saturday workshops and periodic release days (grant-funded subs) for on-site trainers or attendance at district, state, or national seminars and institutes. Teachers will participate in professional development on teaching with technology. Summer Institute Training topics include project-based learning, teaching with technology, Understanding by Design, Curriculum Mapping, iPad Tools/Science Notebooks, Differentiated Instruction, Performance Assessment, Gateway to Technology, AVID, BRMA STEM, PB Zoo STEM, and more.

### ***STEAM INTERACTIVE LEARNING CENTERS***

*Gateway to Technology (GTT) Engineering* is the middle school engineering program of Project Lead The Way. GTT will provide students with rigorous, relevant, reality-based knowledge necessary to pursue engineering programs in high school and college. Students explore math, science, and technology through studies of aerospace, energy, the environment, modeling, robotics, technology and other STEM-related topics. The activities-oriented curriculum challenges and engages the natural curiosity of students. GTT units, taught with a rigorous academic curriculum, are designed to spark an interest in STEM subjects and prepare students for further study. *GTT* consists of five independent units of problem-based activities. Units take ten weeks each, and will be taught across grades 6 – 8. The units include: ► *Design and Modeling* uses solid modeling (a sophisticated mathematical technique for representing solid objects) to introduce students to the design process. ► *The Magic of Electrons* includes hands-

on projects to explore the science of electricity, the movement of atoms, circuit design, and sensing devices. ► *The Science of Technology* teaches about the mechanics of motion, conversion of energy, and use of science to improve communication. ► *Automation and Robotics* teaches about the history and development of automation and robotics. ► *Flight and Space* introduces students to aeronautics and space.

**STEAM Innovation LAB** will be an interdisciplinary hands-on makerspace lab where students will design and produce objects using groundbreaking 3D printers, which take virtual designs and lay down material such as liquid, powder, or metal layer by layer to build a real-life model within hours. The FabLab equipment will include a 3D printer, laser cutters to etch designs or cut flat sheet material such as acrylic to make objects like hall passes and decorative letters, vinyl cutters for making signs, a Polycom unit, and worldwide via video conferencing for project collaboration.. The hands-on building and problem solving that will be central to the lab will have much in common with an art studio. The students will engage spatial skills and bring the ideas of their imagination into the real world. Students will make, build, create, and use a variety of materials. They will also take things apart, analyze, draw and plan their projects. Bringing art into the conversation acknowledges that personal expression and process are critical ingredients in a creative work environment. This lab will provide a learning environment for students to work individually or collaboratively on interdisciplinary projects.

**Robolab - LEGO MINDSTORMS Robotics** uses educational software to develop basic computer programming, robotics and automation skills. Students will experience science, engineering, mathematics, and computer programming with hands-on, project-based STEM learning using innovative, engaging robotics solutions. Using LEGO Mindstorms, students will design, build, program, and test robots that can complete complex tasks, record live data,

respond to environmental changes, and more.. They will learn to behave as young scientists, carrying out simple investigations, calculating and measuring behaviors, and recording and presenting their results. Students will work in small groups on engaging, hands-on, problem-based tasks. Mindstorms introduce students to real-life applications of automated technology and provide skills they need to develop their own solutions to the problems presented. Students will complete a 12 week planned-curriculum unit, and will have opportunity to compete at robotic competitions.

***Project Gallery*** - As the curriculum is project-based, the STEAM Academy will feature a Project Gallery to showcase finished projects as well as works-in-progress. Students are encouraged to learn by seeing and sharing each other's work, binding the community of learners together and driving innovative thinking.

***STEAM Innovation Studio*** - This maker-space studio will include the web-based digital fabrication/3D printing software that allows teachers to introduce more meaningful STEM learning to their students. With maker-space tools and curricular support, teachers will engage students in rigorous STEM learning that is motivating, fun, and inspiring. The STEAM Innovation Lab will provide engaging digital fabrication/desktop manufacturing tools where students can make, test, and revise 2D designs, pop-ups, and 3D objects as they learn the engineering process in a *meaningful context*. These Labs will be active centers for student collaborative projects in science, technology, engineering, arts, and mathematics where students will perform meaningful extended learning, emphasizing group work and project work. Digital photography equipment will support projects in each lab.

***Outdoor Science Classroom*** - The STEAM Academy magnet school will be equipped with an outdoor classroom learning center to foster creativity and motivate environmental inquiry and discovery, as well as an ecologically authentic nature trail. The Nature Trail will have a with walkway, bird blind, wildflower gardens, plants, learning stations, materials, and

outdoor classroom furnished with hands-on, motivational discovery centers to foster creativity and motivate environmental inquiry, experimentation, and discovery. Students will engage in scientific inquiry, observation, photography, etc. Science in the Schoolyard modules and resources will be used, along with PDD inquiry notebooks, data collection, reflection journals. Students will study components of horticulture, meteorology, oceanography, sociology, geology, geography, hydroponics, aquaponics, etc. They will forecast weather, including storms and hurricanes, and make daily predictions via the TV broadcast studio. They will use data collection devices to experiment/draw conclusions about plants, sun, sky, clouds, seasons, weather, and wind. Overall, they will inquire and explore with critical thinking/problem solving, collaborative learning, and to link to educational standards. The Weather Station will have wind tunnel. Students will use related software for data collection and to conduct sophisticated investigative studies to track, investigate, experiment, simulate patterns, discover and forecast; broadcast forecasts daily on school's TV broadcast facility.

***Piano/Keyboarding Composition Lab*** Congress Middle will offer a piano/keyboarding composition lab devoted to the interpretation of musical expression. Not only will this be an important outlet for creativity, it will also offer students a chance to understand music in a specifically digital context. The lab will be equipped with a 20-station electronic piano studio with a teacher's keyboard management station, headphones, and software.

***Dance Studio*** STEAM Academy magnet students will learn dance from a professional dance instructor. Students will learn ballet, hip hop, tap, Latin and other cultural dances. Learning to dance has the potential to improve students' self-confidence, instill the importance of respect and trust, and expand their vocabularies through movement. The benefits of learning

dance is that it allows for differentiation, engages individual learning styles, encourages sustained attention, allows for multiple perspectives, enhances learning in academic disciplines.

**Orchestra** - STEAM Academy magnet students will have the opportunity to learn orchestral instruments and to join the orchestra. The orchestra will play a wide variety of music and will perform at school assemblies, during special parent nights or magnet open houses, all-district concerts and festivals. There are a number of benefits for middle school students who play in an orchestra. Students will gain transferable skills that will apply to all walks of life. Students will learn teamwork, as they work together to effectively produce a sound people want to hear. They will learn time management and coping under pressure. Although playing in an orchestra will be enjoyable, it can also be a high pressure environment because each person is expected to play their instrument to a high standard. This activity can boost students' confidence and instill discipline. Playing music in the orchestra is likely to boost general knowledge and deepen their musical appreciation.

**The Full STEAM Ahead Mural** will reflect the magnet theme of STEAM and will be designed and painted in collaboration with students and teachers at each school. This development of the mural design will be an interdisciplinary arts and mathematics student project with hands-on applications, with the assistance of a contracted professional artist. The student-designed mural will feature multicultural images. The STEAM – themed Mural will be located in a focal point of the school as a point of pride for magnet school students and teachers who will be directly involved in every aspect of the process. This teaching and learning activity will incorporate math and science with real-world applications relevant to the students.

**Online Global Collaboration** - Digital technology provides for differentiation, accountability, and visibility in the learning process. For collaborative learning, the internet

provides the platform for engaged learning, deeper understanding, and some exciting outcomes. With PDDs in hand and connectivity strong, the students and teachers in all five proposed magnet schools will expand their face-to-face collaborations and engage in online global communication and collaboration using Skype. This will start with connecting classrooms between these magnet schools, but the goal will be for these schools to join the geographically dispersed classrooms and schools that use online environments regularly and fully across the US and other countries, with teachers and students using digital technologies to learn with others beyond their immediate environment to support curricular objectives, intercultural understandings, critical thinking, personal and social capabilities, and more. Students will develop a deeper understanding about the world by working together with others, sharing ideas, and using inquiry-based, higher-order-thinking and problem solving skills toward an online collaborative outcome or product. The goal is for this to become a true online global collaboration where students come together with students from a different culture and share ideas, gather information, and co-create artifacts together, building knowledge and sharing with the world. Collaborative creation of artifacts may be in Google Docs, Wikis, blogs, Edmodo discussions, and co-creation tools include videos, e-books, and Google Presentations.

***(b)(2) Demonstrate resources to operate the project beyond the length of the grant, including a multi-year financial and operating model and accompanying plan; the demonstrated commitment of any partners; evidence of broad support from stakeholders critical to the project's long term success; or more than one of these types of evidence.***

***Support of Teachers and Parents*** - The teachers and staff at each proposed magnet school have voted to support of the project and have committed to fully implement the new magnet schools upon notice of the award (*see school letters with staff signatures in appendices*). Also, the School Advisory Council (SAC) in each project school has officially voted to accept and

provide full support for the magnet school theme to be implemented upon MSAP funding, and each school's SAC chairperson has written a letter of commitment to the project, on behalf of the School Advisory Council. (*See appendices for Letters from SAC Chairs.*) Each school's SAC is comprised of parents, community members, business partners, teachers, students, and administrators. The SAC is required by statute to reflect the school's racial/ethnic representation.

The *Volunteers in Magnet Schools* will be organized to assist with school-wide, grade-wide, or classroom multicultural activities; student tutoring; teaching assistance; and assistance for classroom teachers. Parents at these schools have already begun to assist with partnerships. Additionally, volunteer speakers and presenters will be recruited from the culturally international organizations, science research institutes, businesses, and local colleges. The increase in parent participation will assist in increasing contacts for partnerships, and will increase opportunities for assistance for field studies or special learning activities. The increase in parent partnerships will also provide increased opportunities for incentives and rewards to students in the target magnet schools for academic and personal success. The proposed magnet schools will encourage a high degree of parental involvement to support their long-term success.

***Project Partners:*** Throughout the project planning process, a tremendous amount of excitement, interest and support was reaped from a variety of partners, and ***37 partnership letters*** are part of this application. This project has engendered support from the cities where schools are located, from teachers and parents in each schools, and many partners who have committed to contribute a variety of authentic learning experiences. Partnerships will continuously be expanded and strengthened throughout the project.

***School Board Commitment to Sustaining the MSAP Project*** - On February 10, 2016, the School Board adopted the Voluntary Desegregation Plan, and authorized the Superintendent to

implement the five proposed magnet schools of choice with the identified magnet themes upon receipt of the MSAP grant. The School Board and Superintendent will support the continuation of the five proposed school-wide magnet programs at a high-quality level after federal funding is no longer available. In the Voluntary Plan adopted by the School Board on February 10, 2016, the School Board approved the following statement of purpose to sustain the project:

*“WHEREAS, the largest costs to implement the magnet schools are required during the first three start-up years, and, pending the award of the MSAP grant, the School Board commits to provide the necessary resources to continue the operation of the magnet schools at a high performance level after the federal funding is terminated.”*

~ School Board of Palm Beach County, February 10, 2016

The start-up and initial operating costs of the magnet schools will be significantly higher than the cost of continued operation. The start-up and initial 3-year costs reflect a number of considerations, including personnel at both the District and school level. With three years to plan, the District will be able to incorporate the continuation costs into its local budget and apply for local, state, or federal grants. During the start-up years, it is essential that an investment is made in outstanding staff to assure the implementation of unique, high quality programs not available in traditional schools. At the end of the project, it will be necessary to consolidate some staff positions. Some personnel will be hired at the beginning of the grant with the full knowledge that they should be able to do such an outstanding job that they will work themselves out of the grant-funded job, as they will spend three years designing and implementing a uniquely attractive magnet school, unlike any traditional school. The Project Director and technology specialist are District-paid in-kind positions, and they will remain in their positions with time devoted to these five magnet schools. The STEM Coach is an example of a position

that is expected to create so much expertise within the staff that the functions can be carried on without the extra position. The curriculum specialist will finish up with the new curriculum over three years, supported by the teachers who were paid during the first three years to develop, revise, and fine tune their curriculum framework, but the on-site teacher-experts will be able to carry on and address any continuing needs with curriculum. Teachers at each school will have participated in Authentic Education's "Train-the-Trainer" sessions and will have developed a special expertise of their own that the schools can benefit from in the long run. The recruitment specialist will have marketed the schools across the district so that the new magnet schools will be a known item in the communities.

Even so, the highest category of cost for continuing these magnet school programs is Personnel, as the District funds the magnet lead teacher in each magnet school to attend to the quality of the magnet curriculum and instruction, and to carry on the marketing and recruitment required by every magnet school. These efforts will be supported in the long term by the Department of Choice. Other personnel who will be sustained will be the World Language teachers at the four IB schools due to the IB's language program requirements, which is part of what sets these magnet school programs apart from traditional schools.

The costs for travel will be reduced significantly, but some costs will remain to support continuous learning in the field to sustain the innovations and to stay on top of what is new. The International Baccalaureate, for instance, is a continually evolving program that occasionally necessitates training for new curricular requirements.

The supply line in the federal budget is very high because it has been developed with the federal cut-off for equipment as \$5,000 or higher. However, most of what is purchased in the supply line behaves like equipment in that it is long-lasting and durable, not disposable or

consumable, and will be inventoried for years of use. These “supplies” (costing less than \$5,000) include computers/PDDs/software, carts, laser printers and 3-D printers, projectors, tripods, green screens, books and learning kits, microscopes and probeware, a piano and orchestral instruments, and specialty labs such as the language labs, environmental labs, maker space and innovation labs, and the Gateway to Technology lab. Other start-up supply costs included signage, banners, murals, and other “Scream the Theme” related costs to create the recognizable thematic learning environment in each school. The initial investment was necessary to establish the high quality programming. However, since much of these “supplies” will have a relatively long life span, they only need to be replaced on a cyclical basis. Some continuation supply funding will need to be provided for items that are consumable and some for occasional replacements, but these “supplies” should last for years. The continuation supply line will also support annual costs for the marketing and recruitment required for all magnet schools.

The start-up costs for contractual services will have served the purpose of creating schools that have grown their own educational experts, with every teacher on staff having spent at least 300 hours over three years learning and reinforcing new learning related to curriculum development, the use of the new technologies in teaching, and theme-related training for IB and STEAM. Also, for each unique teaching and learning component that consultants bring to the magnet schools, some teachers will be identified as being particularly interested and skilled in each component and start-up funds were allocated for “train-the-trainer” sessions so that each school could grow their own experts to mentor and coach teachers who need support and new teachers who come to the school in later years. Under the budget line for contracted services, the only continuation cost will be the Artists-in-Residence for the Congress STEAM Academy.

The category for “other” costs includes many one-time fees during the start-up years that will not be required beyond the grant. The overall cost in this category is not as high as other categories during the start up years, but the continuation costs will cut that amount in half to pay for the annual fees to IB, FLIBS, for four schools, PYP e-books and Rosetta Stone for two schools, and PLTW for Congress.

Once the magnet schools no longer have federal assistance, the district will maintain the program using local funds. After the initial start-up costs are paid by federal funds, the cost of maintaining the programs will be substantially reduced. The chart below shows the initial start-up costs and the continuing annual costs of the program.

Budget Category	Year 3 Costs	Post-Grant Costs	Post-Grant Justification
<b>Personnel</b>	██████████	██████████	5 lead teachers (1/site) 4 IB Spanish teachers (1/site)
<b>Fringe Benefits</b>	██████████	██████████	Personnel costs
<b>Travel</b>	130,343	16,000	Sustain innovations
<b>Supplies</b>	1,316,762	51,950	May need to replace some PDDs, Marketing & PBL supplies
<b>Contracted Services</b>	526,403	63,180	Congress: Artists in Residence
<b>Other</b>	129,950	76,000	PYP e-library, IB, PLTW, FLIBS, Rosetta Stone Fees
<b>Indirect</b>	116,473	0	No grant to administer
<b>Total</b>	██████████	██████████	About ¼ the cost of start-up year

The SDPBC has received past MSAP grants in the 1989, 1995, 1998, and 2007 funding cycles. When MSAP funding has expired in past projects, the magnet school programs have been sustained at a high level of program quality. The commitment to sustain the five new magnet schools is verified by the actions of the School Board to sustain magnet schools in the past. The District is NOT requesting funds under this project for any previously funded magnet schools.

***(b)(3) PD of sufficient quality, intensity, and duration to lead to improvements in practice..***

High quality, sustained professional development, throughout the three years of the project, will focus on targeted needs, incremental outcomes, and long-term objectives. At all five proposed magnet schools, each teacher will participate in 50 hours per year of workshops or online training aimed at deepening content knowledge and providing models of effective instructional strategies and pedagogy. The project design builds follow-up and coaching activities into the professional learning model. To ensure that training is sustained over time, the project requires each teacher in each school to engage in and document 50 hours of follow-up, job-embedded professional learning, providing opportunities for teachers to practice, research, and reflect to effectively transfer new learning to the classroom.

The lead teacher and STEM coach in each school will support the follow-up with coaching, modeling, demonstrating, and providing feedback, and additional follow-up will be provided by the expert trainers and consultants. The model will enhance collegiality as teachers will collaborate in peer coaching and work together to solve problems related to teaching and learning. The design provides for evaluation of the impact of the professional development program on the teacher as learner and on the students in their academic performance and achievement. All teachers are part of the magnet school project and will participate in professional development. Strategic components will focus on effective instructional strategies for improving academic achievement for all students and for all student subgroups, as well as for meeting the unique needs of a staff undergoing change in the development and implementation of the magnet school project. Training will also address the specific challenges unique to the students in these schools.

A combination of outside technical assistance with specialized expertise and district-support from curriculum specialists will be used. Technical assistance will support effective instruction in heterogeneous, inclusive classrooms using project-based learning and differentiated and inquiry-based instruction, project-based learning, with alternative assessment methods to meet the needs of individual students. Effective school-wide practices will be shared when teacher teams attend training, institutes, conferences, and visit successful theme-alike magnet schools in other districts. The long range goal is to build capacity within the schools to sustain the project when funding ends.

To implement the proposed magnet schools as intended, the entire school staff will have to be ready and open for change. This will require intensive training to support the magnet teachers' extensive needs for professional development to design and deliver the innovative programming. For this reason, substantial funding has been identified throughout the budget for professional development closely linked to implementing the magnet thematic curriculum, as well as to meet the needs of the students to be served. Hourly rates are based on the union-negotiated hourly rate for full-time teachers to work additional hours after school, Saturdays, and in the summers. If teachers are required to travel to the training, those teachers will be reimbursed for travel costs rather than provided supplementary pay. STEM coaches will work with teams of classroom teachers and other staff at these schools to provide follow-up training on-site. Every effort will be made to identify teachers to participate in train-the-trainer activities designed to develop a depth of expertise in a special component of implementation (i.e., inquiry-based instruction, project-based learning, etc.) This in-house expert will be the go-to person during the developmental years of the project, and will ensure each area of expertise continues to be available after the funding expires.

The proposed project will implement four International Baccalaureate schools, requiring specific IB-approved and IB-authorized training for all instructional staff, including the principal as instructional leader. A progressive plan with IB level I, II, and III training topics will be required for all teachers and staff during the three years to achieve authorization as an IB World School. The IB as a magnet theme is an investment in people as the driving force to provide the high quality teaching strategies and curriculum redesign required for IB authorization. The training plan is based on the development of school-wide instructional expertise in best practices as required and endorsed by the IB. The entire teaching faculty and staff at the proposed STEAM Academy will also undergo a full transformation requiring extensive professional development as the magnet teachers develop both content and pedagogy related to the theme.

All teachers will be well prepared to ensure a full transformation from a traditional school to a magnet school. In addition to thematic topics, teachers at all five schools will be trained each year in topics to meet the educational needs of all students in the magnet school, including access and inclusion, differentiation, and cultural sensitivity. All project staff will keep *digital reflection journals* as they reflect on what they learned and how it can best be applied in their school and in the classroom. The intensive preparation, skill development through training, curriculum development and expert technical assistance will ensure that these magnet schools will continue to offer the magnet school theme after the federal funding is terminated.

*Follow-up, Job-Embedded Learning* will be a major focus of the professional learning in each school through coaching, filming, follow-up readings, modeling, reflecting and journaling, observing demonstrations, sharing new learning and working within data-focused PLC teams. Highly qualified PD coaches, consultant trainers, and district specialists will provide follow-up training, materials, and guidance during half-day early release, during planning periods, in set-

aside learning time (e.g., staff meetings, PLCs, magnet curriculum planning), during class, and other creatively structured learning time embedded within the school day.

**Digital Journals** - In all professional development throughout the project, all teachers will use their PDD digital reflection journals to note important points to remember and think about, record, reflect on topics at hand and the meaning of the training and how it relates to the individual teacher, and maintain written reflections of how the teacher intends to transfer the new learning to the classrooms, and then follow-up reflections on its effect. The STEM Coach and the expert training consultants will follow-up with teachers to ensure the implementation of classroom innovations and their commitment to and understanding of topics explored.

**Demonstration Classrooms** will be established in each school (*at least 2 classrooms in each school beginning in year 2*) to allow teachers to observe their colleagues as they implement the thematic curriculum using integrate technology, facilitate inquiry-based and project-based learning, implement personalized strategies, integrate technology, each school in years 2 and 3.

### **1:1 PERSONAL DIGITAL DEVICE (PDD) - PROFESSIONAL DEVELOPMENT TIMELINE**

#### ***SEMESTER 1***

- Develop baseline data for to assess the teachers' use of technology using Florida Technology Integration Matrix and Florida Inventory of Teacher Technology Skills.
- Meet with project partners to develop and schedule professional development for teachers to implement International Baccalaureate (IB) and STEAM magnet programs.
- Plan and schedule workshops for basic uses of core apps needed in the initial professional development and curriculum building sessions for the International Baccalaureate and STEAM program as well as the Designing High Quality Units workshops. Teachers will be trained in the use of Google Apps (Google Docs, Google Slides, and Google Keep) to

use with the workshops. They will use Google Docs to collaborate on the development of their first Programme of Inquiry as well as their learning units for the year. They will also be trained in a core set of teaching apps including Pages (writing, offline note taking, publishing), Keynote (presentation, graphics, graphs, posters), and iMovie (movie making, storytelling, documentation, reflection, projects). These apps will be used in their initial stages of training and sequential follow-up assignments.

- District personnel will work with Lead Teachers and STEM coaches to work with teachers during phase 1 of magnet theme training to help them integrate technology into training and develop the proper basic skills to reinforce their learning. They will receive help to setup initial Google Docs for their Programme of Inquiry and first units of study based on the interdisciplinary, transdisciplinary, or global context units they decide to use. After the workshops, teachers will work with grant staff (district, in-kind, and school-based) to develop units infused with STEM. They will focus on basic skills to develop STEM enrichment using technology and hands-on learning. One example could be development of a paper slide video illustrating how the [water cycle](#) works. Students would use their PDD to synthesize and communicate facts into an informative format.
- Research and develop of STEM/ STEAM rubrics for apps for use at each grade level to infuse into curriculum and interdisciplinary or IB transdisciplinary themes. Strategies for implementation will be researched for building into curriculum development workshops. Teachers will work with district grant personnel as well as in-kind to develop these tools.
- District and school personnel will work with partners and vendors to finalize orders and develop time lines for purchase, setup, and implementation of first phases of 1:1 PDD.

Vendor and district personnel will work with school-based personnel for setup of PDDs for Teachers before initial training.

***SEMESTER 2***

- During the second semester, teachers will begin implementing their first interdisciplinary, transdisciplinary and global context units after initial IB Training and Understanding by Design Workshops. They will receive follow-up mini workshops to introduce new apps and strategies for integrating STEM as well as the technology pieces in small pieces as to not overwhelm the teachers identified as on the low spectrum of STEM topics including instructional technology.
- The teachers will work with grant staff to develop the magnet thematic curricular framework or Programme of Inquiry as well as the initial transdisciplinary themes or global context. In addition, they will begin to develop initial criteria for digital learning portfolios aligned with FL Standards, Science, Social Studies, Engineering Standards, and the International Society for Technology Education (ISTE) Student Standards.
- Based on the digital learning artifacts for the digital learning portfolios, teachers will develop rubrics establishing framework grading and monitoring the portfolios. The digital learning portfolios will be kept in the students Google Drive which will allow for building of a complete work during the student's academic career. Digital learning portfolios will be shared with the teacher allowing monitoring and instructional support and allowing the teacher a more concrete way of assessing student learning.

***SEMESTER 3***

- Teachers will continue to work on developing the thematic framework or programme of inquiry. District staff will work with schools to infuse STEM topics into the framework

or programme of inquiry to align with STEAM, IB and STEM infusion. Teachers will work on first half interdisciplinary, transdisciplinary, and global context units.

- Teachers in Kindergarten, Third Grade, and Sixth grade will attend a Tech Boot Camp for the initial rollout of the student 1:1 PDD beginning in those grades. They will receive training in designing instruction on using the core apps set for students including Google Apps (Drive, Docs, Slides, Keep), Pages (word processing/ desktop publishing), Keynote (Graphics/ Presentation/ Graphs), Explain Everything (Interactive Whiteboard/ Animation), iMovie (documentation/ storytelling/ movie making), Garageband (music/ reading/ poetry/ soundtrack), QR Codes Reader, Inspiration/Kidspiration (graphic organizer/ storyboarding/ outlining/ research), Book Creator (documentation/ eBook maker), Green Screen (projects, virtual constructs) and SparkVue (probeware data collection and journaling). They will focus on developing projects with the core set of apps aligned to their interdisciplinary, transdisciplinary, and global context units. They will collaborate with fine arts and other cross-curricular subject areas to further instruction so it revolves around the transdisciplinary and global context units.
- Partners like Apple, Pasco Scientific, and Fablevision will work with teachers and grant staff to implement this training. They will lend their expertise to further the extension of the technology into the curriculum so the integration is seamless. The focus will be on the instruction and learning and not the use of technology. The training will also focus on the STEM aspect to make sure that it is aligned with their units of study.
- As part of the Technology Boot Camp, they will design rubrics for their projects that will align with digital learning artifacts to be included in their digital learning portfolios.

- Teachers in other grades will receive a smaller condensed training and focus on smaller projects that will build to 1:1 implementation in following years.

***SEMESTER 4***

- The implementation with Kindergarten, third grade, and sixth grade will begin this year with teachers using new skills to teach students. The teachers will be guiding them through using the core set of apps to create digital learning artifacts for their digital learning portfolios. Teachers in other grades will use their digital tools to change the way they teach in presenting the transdisciplinary and global context units.
- Beginning of this school year will implement the initial planning phases for their units. Teachers will be provided substitutes so that they can spend one day each six weeks designing and implementing their units of study based on the transdisciplinary and global context units. District staff will facilitate these sessions to guide them in the inclusion of STEM and reinforce the use of the technology. As they plan their units, new skills will be taught in using the technology for learning STEM.
- One example will be the implementation of the FabLab (makerspace) in these sessions. Teachers will be trained in creating simple activities to use with their transdisciplinary or global context units like creating a pinwheel in the FabLab to demonstrate how wind can be used as an alternative way to generate electricity. Other skills to adopt during these sessions are the use of coding, robotics, makerspaces, and other STEM related activities. New apps and technologies will be introduced aligned to what they are studying in their transdisciplinary and global context units. These units will be documented in Google Docs and archived in a Google Drive folder for purposes of grant documentation. Artifacts from these projects can be included in their student's digital learning portfolio.

- During this semester, teachers in grades Kindergarten, third, and sixth grade will be paired with teachers in first, fourth, and seventh grades to begin the process of mentoring them to transition from a one PDD to teach with to a 1:1 PDD learning environment. This will begin the transition for them to learn and plan for implementation.
- Meeting with community and corporate partners will be held to determine when and how they will be integrated into the units during the school year as well. Planning will also be needed to facilitate purchases and integration during the school year and for the next year as well.
- Students will be collecting one to two digital learning artifacts each six weeks that demonstrate what they have learned through the transdisciplinary and global context units into their digital learning portfolios. Documentation of the Technology Boot Camp, planning sessions, reflective teaching, and digital learning artifacts will be collected and translated into marketing items for the school center to use with student recruitment. Teachers will contribute items for this purpose to the schools' magnet coordinator.
- During the Fall, teachers will start planning end of year celebrations with culminating events for students. One example would be to work with business and community partner Florida Power and Light to discuss throughout the year different types of energy and how they are produced. They will also learn how energy is used around the world. They can develop several scenarios from around the globe and produce them with the FabLab into simulated communities.

### ***SEMESTER 5***

- This semester will see continued implementation of the 1:1 in grades Kindergarten, third, and sixth grades. Teachers and students will see how to use the Proscope Micro Mobile

lens and Pasco Scientific Probeware with their PDDs. They will conduct real-world science projects with engineering components. For example, students in sixth grade will learn to be meteorologist and determine how the weather shapes the world we live. They will use the weather probe to determine temperature, humidity, wind velocity, as well as precipitation. They will collect this data and collect satellite images from various world sources to compare weather in their local community with weather in other parts of the world. They will use Explain Everything app to create a weather map of their community and show weather fronts over satellite images. These weather reports will be just like meteorologist in front of green screens so they can illustrate them. Students will create a weather report they can share on their school news programs. In addition, students will design and build a better rain gauge in the FabLab environment to improve collecting precipitation. This is one example of how STEM impacts student lives and prepares them for real world careers by collecting and using data from a variety of sources compared to other parts of the world which reflects the learner profile of IB.

- Planning and implementation timelines will start for the next year's implementation of the 1:1 PDD initiative for grades second, fourth, and seventh grades. Apps will be selected to add to the core set of apps used for constructivist teaching and learning in those grades. Teachers in first phase will collaborate and share ideas for development in next year. Schools will work with district and school staff to begin the ground work for the next year's Thematic Curriculum Framework or Programme of Inquiry. This will help teachers prepare for the next year. Teacher will use their planning days and periods to continue to develop units of study based on interdisciplinary, transdisciplinary and global context units.

- Finalization for the student exhibit projects will be finalized and implemented.

### ***SEMESTER 6***

- The summer will be a time to reflect - what worked or didn't work. Teachers will be asked to reflect back and list things that went well and things that need some work. This list will be used to formulate more professional development during the summer and throughout the next school year.
- Technology Boot Camp will begin again before the school year starts with teachers in grades third, fifth, and eighth grades working to learn how to integrate the PDD, apps, other technologies into their classrooms. One day will be developed to mentorships where the teachers from the previous grade levels will work one on one to develop the next years thematic framework or programme of inquiry's transdisciplinary or global context or interdisciplinary units. They will work with each other and share information on the students. Teachers from previous years will share work from the digital learning portfolio so the upcoming teachers can get to know the students personally and academically before they enter their classrooms.

### ***(b)(4) The Project is supported by strong theory.***

The selected strategies, programs, products, and practices of this MSAP project are founded upon ***research and best practices***. (Refer to the appendices for logic models – one district logic model with the project overview, and one logic model per school/five schools).

**Implementation of a Magnet School** - The MSAP project incorporates lessons learned about program implementation, promotion, and continuous improvement outlined in *Creating Successful Magnet Schools Programs* (USDOE, 2004). These include: 1) *appealing and sustainable themes* (IB PYP, IB MYP, and STEAM; 2) *developing and selecting quality staff*

with members committed to the theme, as demonstrated in the IB and STEAM teacher commitment letters; 3) as demonstrated in the letters of support, city resolutions, and mayor letters, *community resources* have been cultivated; 4) *special roles* that include a STEM Coach and Lead Teacher at each school are proposed; and 5) *district support* is evident throughout the project and includes the in-kind contribution of the Project Director and Educational Technology Specialist, as well as an *Magnet Advisory Board* that includes participants from various departments across the district, bringing different areas of expertise to support the project.

The project also aligns with USDOE recommendations to promote the programs through extensive marketing efforts, ensuring that the application process is easy for parents, consistent, and fair; and that the transportation plan is coordinated with other choice programs. Finally, as recommended, the project planning has carefully provided for, and budgeted for, all of these vital magnet school implementation components – 1) time for teacher collaboration; 2) high quality professional development; 3) coordination with state and district standards; 4) use of parents and outside resources to implement the program (evident in the partnership letters and the letters from each schools SAC Chairperson [School Advisory Council]); and 5) continuous improvement through data driven decision-making with community and parental involvement.

The project's continuous improvement, community partnerships, and outreach and marketing strategies will help sustain the project, as outlined in *Creating and Sustaining Successful K–8 Magnet Schools* (USDOE, 2008). Research demonstrates that attendance at a magnet middle school has positive effects on students' reading achievement, as well as academic attitudes and behaviors and attendance, compared to students in non-magnet schools. Studies further demonstrate that magnet schools are able to retain significant groups of white students from higher income and more highly educated communities. Their faculties are more stable than

non-magnet school faculties, in addition to being more racially diverse. Furthermore, magnet schools are more successful in retaining experienced teachers than non-magnet programs (Siegel-Hawley, G. & Frankenberg, E., 2008).

**Increased Time For Professional Development** Time for high quality professional development is essential to the project's success. In a meta-analysis of 1300 studies addressing the effect of professional development on student achievement in mathematics, science, reading and English/language arts, the nine that met *What Works Clearinghouse* Standards demonstrate the vital importance of the amount of time devoted to professional development for teachers. These nine studies conclude overall that a larger amount of time (with quality, intensity, and duration) devoted to professional development will have a direct and positive impact on student achievement. The results show that students would increase their achievement by 21 points if their teachers had substantial professional development (an average of 49 hours across these studies) (Yoon, K. S., Duncan, T., Lee, S. W.-Y., Scarloss, B., & Shapley, K., 2007). Additionally, a comparison of American schools and schools abroad reported that the more intense and long-term the professional development that teachers receive, the greater the achievement gains of their students the next year (Darling-Hammond, L., Chung, W. R., Andree, A., Richardson, N., and Orphonos, S., 2009).

The design of the *professional development proposed in this MSAP project* is based upon the *strong theory* found in these nine studies that more hours of professional development for teachers will have a positive effect on student achievement, and the professional development planned for this project meets the design standards of quality, intensity, and duration. For *intensity and duration*, the project requires (*objective performance measure 5.0*) that each teacher in each proposed magnet school participate in at least 50 hours of professional

development each year, followed by (and documented) at least 50 hours of follow-up, reflective and job-embedded professional learning each year. For *quality*, the design is aligned with the three requirements for effective professional development as outlined in the meta-analysis mentioned above. They include:

- 1) To enhance teacher knowledge and skills, the professional development offered throughout the project will: a) be high quality-intensive, well-defined, and implemented with fidelity; b) be founded upon validated theories of teacher learning; and c) promote and extend the evidence-based effective curricula and instructional models.
- 2) The project design ensures that the professional development will be effective and include teacher support and content experts to improve teacher efficacy, motivation, and skills to apply the professional development to their teaching.
- 3) The professional development is designed to improve teaching through coaching, follow-up, support, and observation in order to raise student achievement (Yoon, K.S. 2007).

**IB Primary Years Programme in two proposed elementary magnet schools** - This MSAP project incorporates the strategies identified as successful for IB PYP implementation, which include: whole school programming; collaborative planning; ongoing and continuous training; available resources; involvement on the part of the family and community (see extensive letters of support in the Appendices); school leadership support and support of the IB coordinator (Hall, J, Elder, T, Thompson, J and Pollack, S., 2009). A global research study demonstrates that IB PYP and MYP students outperformed their non-IB peers in math, reading, narrative writing and expository writing in a majority of grade levels (Tan, L and Bibby, Y. 2010). A later study showed positive effects on student values and attitudes, perceptions of school life, and social and emotional well-being compared to non-IB students (Tan, L and Bibby, Y., 2012).

**IB Middle Years Programme** -A study of both PYP and MYP in Texas described the following impacts of the program as positive: IB professional development; the higher level thinking skills and a broader worldview developed by the students; the emphasis on global learning and cultural awareness; improved collaboration among teachers and increased student motivation; the focus on all students; and the authenticity of the assessment (Sillisano, J. R., et. al. 2010). A study within a large, socio-economically diverse school district demonstrated that a higher percentage of MYP students achieved proficient or above on mathematics and science assessments than the matched comparison group (Wade, J. 2011). Similarly, a quasi-experimental study of PYP and MYP students outperformed non-IB students in science (Healer, M. I., 2013).

**STEM or STEAM School -** STEM education advocates stress the interrelationships of the STEM subjects and the necessity of an interdisciplinary approach to teaching science, technology, engineering, and mathematics (Thornburg, D., 2008.). In addition to developing content knowledge, STEM education also seeks to cultivate soft skills such as scientific inquiry and problem-solving skills (Katehi, L., G. Pearson, and M. Feder, 2009). These comments confirm that STEM education should include the interdisciplinary and hands-on, experience-based pedagogical techniques (Hanover, 2013) proposed at all of the schools, and specifically the school-wide project-based learning strategy proposed for the Congress STEAM Academy.

The implementation of a STEAM program at Congress is supported by research on arts integration. As measured by standardized tests, SAT, graduation rates and college attendance, overall academic achievement improves with arts study as does, more specifically, achievement in language, literacy development and mathematics (ArtsEd, 2016). In particular, students from lower socioeconomic levels, English Language Learners, and those with special needs

demonstrate the most significant improvement in academic achievement when they participate in the arts (Catterall, J., 2009).

**(c) QUALITY OF MANAGEMENT PLAN (15 Points)**

***(c)(1) Plan to achieve the objectives of the project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing tasks.***

The SDPBC is the applicant and fiscal agent responsible for the execution and administration of the MSAP Project. The District has the experience and capacity to manage the MSAP grant effectively, with clearly delineated authority and responsibility, and with experienced, highly qualified and professional staff who are full time district employees in positions that require continuity and follow-through. Upon notification of funding, the SDPBC will immediately launch the MSAP Project to establish the new school-wide magnet programs so that more students will have the opportunity to choose to attend the high quality magnet schools that will prepare all students to function well in a culturally diverse, technologically-oriented, competitive global society. Implementation will begin school year 2016-17 for all five magnet schools, and all objectives, as measured and quantified by an external, independent evaluator, will be accomplished within the designated three-year project period.

This proposal's objectives and performance measures are aligned with the six purposes of the MSAP. A set of objectives are aligned with the purposes, followed by the logic model activity, and performance measures, to quantify the effectiveness of each magnet program, not only to provide the important outcomes to which energy and time will be directed, but also to provide a continuum of annual benchmarks that will empower the project's management team, school staff, and students to proceed toward mastery of these outcomes.

<b>MSAP Purpose 1</b>	<b>Objective 1.0</b>
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<p>The elimination, reduction, or prevention of minority group isolation in elementary and secondary schools with substantial proportions of minority students...</p>	<p>By September 30, 2019, MGI of Black/African American or Hispanic students will be reduced by 9% and socioeconomic integration will increase by 12 % in each school, as verified by an evaluator. <b><u>GPRa a</u></b></p>
<p><b>Performance Measures (PM) 1.1–1.5:</b> By September 30 of each project year, enrollment targets will be attained by <u>reducing Minority Group Isolation (MGI) of Black/ African American or Hispanic students at each proposed magnet school</u> (baseline 2015-16) by a minimum of at least 3 percentage points by the end of year 1; at least 6 percentage points by the end of year 2; and at least 9 percentage points by the end of year 3, as documented by district enrollment records.</p> <p><b>1.1 Palmetto ES Magnet</b> will reduce proportion of MGI Hispanic students by 3% per year.</p> <p><b>1.2 Grove Park ES Magnet</b> will reduce proportion of MGI Black students by 3% per year.</p> <p><b>1.3 H.L. Watkins MS Magnet</b> will reduce proportion of MGI Black students by 3% per year.</p> <p><b>1.4 Congress MS Magnet</b> will reduce proportion of MGI Black students by 3% per year.</p> <p><b>1.5 Carver MS Magnet</b> will reduce proportion of MGI Black students at least 3% per year.</p>	
<p><b>1.6:</b> By September 30 of each project year, the proportion of students who qualify for the federal lunch program (low SES) at each magnet school will be <i>reduced by at least 4 percentage points</i> compared with the previous year. (Baseline: Palmetto 97%; Grove Park 93%, H. Watkins 88%, Carver 86% , and Congress 87%. Baseline percentages will be reduced by 4% per year. )</p>	
<p><b>1.7:</b> For each year, each elementary magnet school will receive a minimum number of applications, as follows: at least 65 applications in year 1; 75 in year 2; and 85 in year 3.</p>	
<p><b>1.8:</b> For each year, each middle magnet school will receive a minimum number of applications, as follows: at least 75 applications in year 1; 85 in year 2; and 100 in year 3.</p>	

**Benchmark:** All proposed magnet schools will reduce minority group isolation and increase socioeconomic integration by conducting a targeted marketing and recruitment campaign to attract additional students by magnet choice. The added student population will reduce MGI by decreasing the proportion of minority isolated Black or African American students at Grove Park, H.L. Watkins, Carver, and Congress, and decreasing the proportion of minority isolated Hispanic students at Palmetto. For the applicant pool, the proportion of isolated students will be 10 percentage points less than actual enrollment for each school.

The table below illustrates the racial/ethnic and socioeconomic composition of students enrolled in each school as compared to the composition of the students in the District.

PROPOSED MAGNET SCHOOLS	# Students Enrolled	Black or African American	Hispanic	White	Other	Low SES	# Seats Available by Choice
Palmetto Elem	530	9%	81% <i>MGI</i>	8%	2%	97%	352
Grove Park Elem	641	67% <i>MGI</i>	22%	6%	5%	93%	313
HL Watkins Mid	933	70% <i>MGI</i>	15%	9	6%	88%	319
Carver Middle	850	64% <i>MGI</i>	13	9	5%	86%	684
Congress Middle	928	61% <i>MGI</i>	24	8	6%	87%	504
School Totals	3,882						2,172
District-Wide		29%	32%	34%	5%	56%	

**Minority Group Isolation (MGI)** occurs at a school when the proportion of students belonging to a specific minority group is significantly greater than district average percentage for that group.

**Need to Reduce MGI:** The percentage of *Black or African American* group students enrolled in Grove Park, HL Watkins, Carver, and Congress is more than twice the district average for that group, and the percentage of Hispanic group students enrolled at Palmetto is more than twice the district average for that group, or significantly greater than the district average percentage for

*that group.* Thus, there is a need to reduce MGI at all five schools. **To reduce MGI**, the project will implement the attractive magnet schools, and the marketing campaign will focus efforts on recruiting students by choice from the targeted neighborhoods. **Neighborhood Students:** Admission to each magnet school will be available to all students living in the attendance zone of each school. All remaining seats will be filled with the applicant pool. **Capacity:** The magnet schools are all under-enrolled and under-utilized. Each facility has space available to attract and bring together a diverse group of students from different backgrounds by choice, thereby reducing MGI and increasing socioeconomic integration.

MSAP Purpose 2	Objective 2.0
To develop and implement magnet school projects that will achieve systemic reforms, and provide all students the opportunity to meet challenging State academic content and student academic achievement standards.	By the September 30, 2019, all students in each of the five magnet schools will receive instruction that includes their school's systemic reforms and magnet themes in units and courses aligned with Florida Standards, as verified by the evaluator.
<p><b><u>Performance Measure 2.1:</u></b> By September 30 of each project year, at each magnet school, at least 33% (year 1), 66% (year 2) and 100% (year 3) of all core academic subject units will meet district, school and project quality criteria determined by peer reviews using a unit quality rubric.</p>	
<p><b><u>Performance Measure 2.2:</u></b> By September 30 of each project year, each magnet school will submit (electronically) to the Project Director an magnet curriculum document, aligned with state standards, that includes peer reviewed units for challenging instruction and interdisciplinary projects demonstrating high expectations for student learning and academic performance, as documented annually by an analysis of each school’s living magnet curriculum document.</p>	

The implementation of theme-related curricula, improved instruction and student academic supports for systemic reform will be facilitated and supported by the MSAP Staff and school leadership team. With the support of the project’s curriculum specialist, teacher teams will write thematic curriculum units during planning time in school, supplemented with after school and summer sessions. The curriculum will be developed as a dynamic, living document that will continually be honed, updated, and enriched by the latest research, educational tools, and teaching materials. Teachers will collaboratively design, develop, and peer review the theme-specific, challenging and interdisciplinary curriculum, aligned with Florida standards, infused with high expectations for student acquisition of knowledge and skills, within and across subject areas. Curricular units will be submitted to the Project Director by each school annually.

MSAP Purpose 3	Objective 3.0
The development and design of innovative educational methods and practices that promote diversity and increase choices in public schools.	By September 30, 2019, each of the five magnet schools will develop, design, and implement innovative educational methods and practices that promote diversity and increase choices, as verified by evaluator.
<p><b>Performance Measure 3.1</b> By September 30 of each project year, <i>all students</i> at each magnet school will receive high quality instruction directly related to the magnet theme for at least 5, 10, and 15 hours per week, respectively, integrated into core academics and in separate theme-related projects or subjects, as determined by unit plan analysis, surveys, interviews, walkthroughs, and the digital portfolio. Units and lessons produced as a result of this project will be peer reviewed.</p> <p><b>Year 1:</b> All students will receive thematic instruction for at least <i>5 hours per week</i>.</p> <p><b>Year 2:</b> All students will receive thematic instruction for at least <i>10 hours per week</i>.</p> <p><b>Year 3:</b> All students will receive thematic instruction for at least <i>15 hours per week</i>.</p>	

**3.2** By September 30 of each project year, all teachers in each magnet school will demonstrate the effective use of the personal digital device for instruction through development/implementation of an increasing number of quality technology-infused units and projects each year, as determined by unit plan analysis, surveys, interviews, walkthroughs, and digital portfolios.

**3.3** By September 30 of each project year, all students will gain STEM knowledge and understanding by engaging in digital learning activities with a ‘real world’ context, as reflected through the digital learning portfolio artifacts.

**3.4** By September 30 of each project year, the schools implementing the IB themes will complete the annual IBO requirements for authorization by the end of the project, as evidenced by confirmation of submission of appropriate materials to the IBO (years 1 and 2) and official notice of authorization as an IBO World School (year 3).

Each year, students will participate in *increasing incremental thematic instruction* time as a result of teacher training and increased implementation of the challenging, interdisciplinary magnet curriculum. Success will be determined through unit plan analysis and confirmed with interviews, and walkthroughs and surveys. The teacher’s use of the personal digital device will be measured by the development and implementation of quality technology-infused units and projects as determined by unit plan analysis, surveys, interviews, walkthroughs, and completion of the student digital learning portfolios. In the phased-in implementation approach, the PDD usage will increase and can be measured through student digital portfolios. Each year, students in the implemented phases will show productive growth as evidenced by rubrics developed to determine criteria and standards-based completion. Units and lessons produced as a result of this project will be peer reviewed. Technology-infused magnet theme integration and intensive professional development will produce high quality magnet curricula and instruction which will

increase student diversity and choice because neither the curricula nor the personal devices are offered at other schools.

**IBO Authorization** – Each year, the four schools proposed to become IB schools will implement all required activities to develop innovative methods and practices, and to progress on schedule toward IB authorization by the third year. Annual progress will be monitored by completion of required units of inquiry, IB teacher training, and annual documentation related to authorization.

MSAP Purpose 4	Objective 4.0
<p>Courses of instruction within magnet schools that will substantially strengthen the knowledge of academic subjects and the attainment of tangible and marketable technological and professional skills of students attending such schools.</p>	<p>By September 30, 2019, at each of the five magnet schools, student academic achievement will increase each year in English language arts, mathematics, and science for the total population and for students in each major ethnic and racial subgroup.(GPRA b and c)</p>
<p><b>PM 4.1 – 4.2</b> September 30 of each project year, the percentage of "All Students," students from each major racial/ethnic group, and low SES students who score at level 3 or above on the Florida State Assessments (FSA) will increase when compared with the previous year: <b>4.1</b> English language arts; <b>4.2</b> mathematics, as verified by FLDOE accountability reports.</p>	
<p><b>4.3</b> By September 30 of each project year, the percentage of "All Students," each major racial/ethnic subgroup, and low SES students who score level 3 and above on the <u>Statewide Science Assessment</u> will increase compared with the previous year at each magnet school.</p>	
<p><b>PM 4.4:</b> By the end of the project (year 3), the FLDOE Grade Score for each of the five magnet schools will increase when compared to the baseline of 2015-2016.</p>	

**PM 4.5:** By the end of the project (year 3), 75% of students at each magnet school will develop mastery of the magnet curriculum through special interdisciplinary projects (group or individual), as determined by project based assessments scored by rubrics.

The State administers the Florida Standards Assessment (FSA) in English language arts (ELA) and mathematics to students in grades 3-8. In addition, Florida administers the Statewide Science Assessment (SSA) to students in grades 5-8. Each year, the State determines the percentage of students reaching proficiency (identified as satisfactory for scores of level 3 or above) for ELA, math, and science. All students are tested in April of each school year. Data is analyzed by the Florida DOE and made available to school districts. This data is provided for All Students and for each of the subgroups of students. Further, the State assigns each school a School Grade. Each school is rated based on percentages of students scoring at level 3 or above on the FSA in ELA and mathematics, as well as learning gains made by all students and learning gains made by students in the lowest 25%. This produces a scale score of up to 800 points for elementary and 900 points for middle. The score is then translated into a School Grade, ranging from A to F. The percentage of all students and of students from ethnic and racial subgroups who attain a score of Satisfactory or above on the FSA and SSA will increase, and the scale score for each school will increase.

Inquiry-based instruction and project-based learning will be used at all five schools to provide for successful academic engagement with a thematic focus to develop the students' abilities in communication and collaborations. For each grade level, project based assessments (performance measure 4.5) will be developed by the teachers with the support of the curriculum specialist. Rubrics will be used at least twice per year in years two and three. Each year, students will

engage in collaborative, authentic learning, using all appropriate technologies, to produce interdisciplinary, theme-related projects individually and with teams.

MSAP Purpose 5	Objective 5.0
<p>Improvement of capacity of local education agencies, including through professional development, to continue operating magnet schools at a high performance level after Federal funding for the magnet school is terminated.</p>	<p>By September 30, 2019, teachers in the five magnet schools will have participated in <u>at least 300 hours of professional learning</u> that will enhance the magnet theme development and implementation and sustain the magnet schools at a high performance level after the Federal magnet funding is terminated, as verified by an outside, independent evaluator.</p>
<p><b>PM 5.1</b> By September 30 of each project year, teachers at each magnet school will participate in at least <b>50 hours professional development</b> (i.e., workshops, courses, etc.) directly related to magnet theme development and integration for improvement in curriculum and instruction, and at least <b>50 hours follow-up, embedded professional learning</b> (i.e., coaching, modeling, practice, feedback, PLCs, etc.) to enhance transfer of learning to the classroom, as documented by training agendas, electronic attendance and in-service reporting forms, and digital reflections in each teacher’s digital journals. Other performance measures related to capacity building include: (2.1, 3.1) develop/implement systemic reforms and magnet theme units.</p>	

The professional development intended for this project is of the highest quality. The Project Director and curriculum specialist will schedule the professional development during the school year and summer, and the curriculum specialist will coordinate and facilitate the events. The curriculum specialist will work closely with the Department of Professional Development to develop inservice components so that the time teachers spend in workshops will be credited

toward the next renewal of their state certification. On site, the curriculum specialist will support the STEM coach at each school to gather the data and maintain electronic records on who participated in what professional development activity, for how long, as well as documentation of the follow-up, job-embedded professional learning in which the teachers engage. Teachers will provide feedback on the professional development activities through a written evaluation of each event. Immediately after each workshop, the curriculum specialist and/or the STEM coach will prepare a written summary of the PD event, and the summaries for each school will be reviewed by the Project Director three times per year. The training documentation will be maintained electronically, including attendance, agendas, workshop materials, PLC schedules, in-service points earned, and the digital log of the STEM coach’s follow-up with teachers. These electronic files will be available for the Project Director and evaluator, upon request. Quality will be determined through survey analysis, interviews and class observations.

The integration of the magnet theme into the curriculum and instruction, supported by intensive professional development, is a key component of this project. Because of this, the fidelity of implementation will include an examination of the intended curriculum, as presented in curriculum materials and professional development, and the enacted curriculum, as seen in classrooms. Making this examination and comparison will help determine if the professional development activities are effective in integrating the magnet theme into the classroom and will determine whether there is a need to modify or intensify professional development activities.

<b>MSAP Purpose 6</b>	<b>Objective 6.0</b>
Ensuring that all students enrolled in the magnet school programs have equitable access to high quality education that will enable the	By September 30, 2019...  6.a: All students in the project magnet schools will have equitable access to high quality education...

<p>students to succeed academically and continue with post-secondary education or productive employment.</p>	<p>6.b. Parent participation will increase in each of the five project magnet schools, as verified by an outside, independent evaluator.</p>
<p><b>Performance Measure 6.1.</b> By September 30 of each project year, student enrollment in all STEM classes at Congress Middle School will reflect that school’s enrollment for major racial/ethnic groups (Black, Hispanic, White) and gender by <math>\neq</math> 15 percentage points, as verified by an analysis of disaggregated enrollment for race/ethnicity/gender.</p> <p><i>Year One:</i> 70% of students enrolled in each STEM class reflects school/grade levels</p> <p><i>Year Two:</i> 75% of students enrolled in each STEM class reflects school/grade levels</p> <p><i>Year Three:</i> 80% of students enrolled in each STEM class reflects school/grade levels</p>	
<p><b>Performance Measure 6.2.</b> By September 30 of each project year, student enrollment in all World Language classes at Grove Park Elementary, Palmetto Elementary, Howell L. Watkins Middle, and Carver Middle School will reflect that school’s enrollment for major racial/ethnic groups (Black, Hispanic, White) and gender by <math>\neq</math> 15 percentage points, as verified by an analysis of enrollments disaggregated by race/ethnicity/gender.</p> <p><i>Year One:</i> 70% of students enrolled in each World Language class reflects school/grade levels</p> <p><i>Year Two:</i> 75% of students enrolled in each World Language class reflects school/grade levels</p> <p><i>Year Three:</i> 80% of students enrolled in each World Language class reflects school/grade levels</p>	
<p><b>6.3</b> By September 30 of each project year, the numbers of parents who participate in school activities will increase (compared to previous year) in each magnet school.</p>	

An important aspect of ensuring that all students in the magnet schools have equitable access to high quality education is to monitor access to specialized courses that prepare students for college and careers. The specialized activities must be available to all students. Thus, activities

and assignments will be monitored on a regular basis for participation by students of different backgrounds, so as to remedy any imbalances that do occur as soon as they become apparent. Success will be determined by analysis of class enrollments disaggregated by race/ethnicity and gender. The percentage of classes that meet the criteria will increase each year. *Parent involvement* also promotes equitable access to high quality education for all students. Workshop materials, attendance records and parent interviews will determine parent participation and satisfaction, to be collected by the magnet lead teachers as sessions occur, summarized, and submitted to evaluators and the Project Director 3 times per year. Number of parents involved in school activities will increase in years 2 and 3.

The *management plan* is designed to enable project staff to achieve the goals and objectives in a timely and efficient manner with all objectives accomplished as quantified by annual performance measures. To foster systems change in the proposed magnet schools, continuous hands-on support, leadership and technical assistance will be provided by the project management team throughout the 3-year project period. Local capacity to provide, improve, and expand services is built-in at every level of planning, development, and implementation

**Central Management Team**

Position	Name	Funding Source	% Time on Project
Project Director	Sandra Wesson	In-Kind/Local Funds	50%
Recruitment Specialist	TBD	MSAP Grant	100%
Budget Technician	TBD	MSAP Grant	100%
Technology Specialist	John Long	In-Kind/Local Funds	50%

The management team will work closely with district leadership, magnet school principals, lead teachers, program specialists, and the Magnet Advisory Council to carry out activities so as to accomplish project objectives on time and within budget.

**Project Management Timeline**

TASKS	RESPONSIBLE	YR 1	YR 2	YR 3
Appoint MSAP Staff	PD, School Board	October		
Appoint Lead Teachers	PD, Prin.	October		
Orientation/All Magnet Staff	PD, Prin., CS, RS,	Oct-Nov		
Develop Recruit Materials	RS, Prin., LT	Oct-Nov	June-July	Jun-July
Recruitment Campaign	RS, Lead Teachers (LT)	Nov-Aug	July-June	July-June
Monitor Application Pools	PD, RS	Weekly	Weekly	Weekly
Lottery/Assign Students	PD, RS	3 x year	3 x year	3 x year
Schedule Teacher Trainings	PS, Lead Teachers (LT)	Nov- July	Oct-July	Oct- July
Summer Training Institutes	PD, CS, PC, LT, Teachers	July	July	July
Prof. Learning Communities	Principals, LT, Tchr Teams	BiWeekly	BiWeekly	BiWeekly
Pre-Post Assessment/Surveys	Teachers, Students, Parents	Sept, May	Sept, May	Sept, May
Curriculum Development	CS, PS, LT, RS, Tchr Teams	Dec - June	Sept-June	Sept-June
Order Supplies/Equipment	PD, PS, CS, LT, RS	Oct - Aug	Sept Aug	Sept Aug
Collect Evaluation Data	Evaluator, PD, Principals	Sept-May	Sept-May	Sept-May
School Advisory Council	SAC Chair, Prin., LT, SAC	Monthly	Monthly	Monthly
Formative Eval Visits/Reports	Outside Evaluator	Quarterly	Quarterly	Quarterly
AVID Leadership Training	Principals, LT, PS	Dec	Dec	Dec
MSA Magnet Conference	PD,CS, RS, LT, Principals	April	April	April
Magnet Roundtables	PD, CS, LT, Teachers	Monthly	Monthly	Monthly
Magnet Advisory Council	PD, Council Chair, Members	Monthly	Monthly	Monthly
School Exhibits/Performances	All -Tchrs, Students, Parents	May	May	May
Summer Training Institutes	PD, CS, All Teachers/Staff	June, Aug	June, Aug	June, Aug
Summative Evaluation Report	Outside Evaluator	June/Sept	June/Sept	June/Sept
Report to Supt, School Board	Project Director	July	July	July

To attain all objectives within the project period, the *Management Team must carry out major functions* central to the project's primary purposes. Many of these functions are continuous by nature, and are difficult to accurately isolate at fixed points on the calendar. The management

staff will invest a significant portion of time in these continuous activities to meet project purposes and accomplish objectives on time.

***Continuous Year-Round Management Functions and Activities***

Market Magnet Schools	Recruit Students	Parent Involvement
Project Development	Curriculum Development	Project Dissemination
Monitor Application Pools	Magnet Advisory Activities	Monitoring Student Progress
Liaison with Feeder Schools	Liaison with Partners	Liaison with Collaborators
Student Community Service	Equipment Maintenance	Student Recognition

***(c)(2) Ensure a diversity of perspectives are brought to bear in the operation of the project, including parents, teachers, business community, a variety of disciplinary and professional fields, recipients or beneficiaries of services, or others, as appropriate***

SDPBC’s leadership is based upon a collaborative culture that supports the Superintendent in building and maintaining relationships with district and school leadership, teachers, parents, businesses, and other community organizations and representatives. The management of this project has and will continue to incorporate this collaborative philosophy with the establishment of the ***Magnet Advisory Council***. During the initial planning phase, the Project Director received support and guidance from the project planning committee, including parents, SAC Chairs, principals, teachers, community members, businesses, public institutions and agencies, and key district administrators with expertise in technology, STEM and the arts. Upon notification of MSAP funding, the ***Magnet Advisory Council*** will be built upon this initial planning committee to expand and assume the role of district oversight committee for the MSAP Project. The ***Magnet Advisory Council*** will be a critical component for MSAP management and leadership. Through the shared vision of equity and excellence inherent in this council of school and community leaders, the ***Magnet Advisory Council*** is designed to oversee the direction of and

provide guidance toward the full and effective implementation of each magnet school and the attainment of the project's goals and objectives. The Advisory Council will review the independent evaluator's reports and recommendations, the marketing plan and application data, curricular revisions and other thematic components, and provide feedback and recommendations. The *Magnet Advisory Council* will meet every other month, in rotating school locations during all three project years. The members will include the MSAP Project Director and management team, specialists in STEM and technology, the site principals and lead teachers, the SAC Chair and other parents from each school, the project evaluator, and representatives from major partnering organizations. Major partners include the Scripps Research Institute, Max Planck Institute for Neuroscience, the South Florida Science Center, the Palm Beach Zoo and Conservation Society, the Norton Museum of Art, Florida Power and Light, the Kravis Center for Performing Arts, Loggerhead Marinelife Center, Boca Raton Museum of Art, the T. Leroy Jefferson Medical Society, and the Society of Four Arts Children's Library.

Also, the *School Advisory Council* (SAC) in each school will assume a major role in the project, and provide local oversight to address the development and needs of their respective magnet programs. The implementation of the MSAP magnet school project will be the major focus of the School Improvement Plan. The SAC is established by Florida Statute and given authority and a powerful voice in the direction each school takes. The SAC meets on a monthly basis to review, approve, guide, and advise on activities for the school. By Florida statute, a SAC is comprised of parents, community members, business partners, teachers, students, and administrators, and each school's SAC is required by statute to reflect that school's racial/ethnic representation. The SAC in each project school has officially voted to accept and provide full support for the magnet school theme to be implemented upon MSAP funding, and each magnet

school's SAC chairperson has written a letter of commitment to the magnet school project, on behalf of the *School Advisory Council*. (See appendices for Letters from SAC Chairs.)

Parents have played a vital role and will continue to play a key role throughout all phases of the project. Each lead teacher will create the ***Parent Outreach Program*** at each school to quickly mobilize staff members for comprehensive parent outreach. Informative newsletters, websites, e-mails, opinion polls and surveys, and telephone contacts will be used to recruit parents to workshops with their children, to assist and participate in school events, and mobilization will also be used to gather as much input from parents as possible on an ongoing basis. Parents will attend meetings and events to learn about and provide feedback on the magnet theme in their child's school, the school advisory council, the school's progress toward improvement and meeting MSAP objectives, strategies for supporting student academic performance at home, and other planned magnet parent events. Parents will actively help to build a positive image for the schools to attract other families to send their children to the magnet schools by choice.

**(d) QUALITY OF PERSONNEL (10 Points)**

All personnel employed by the project will be highly qualified professionals who hold a Florida Professional Educator Certificate that is awarded to applicants who have at least a Bachelor's degree and have demonstrated mastery of subject area knowledge, general knowledge, professional preparation, and educational competence. All project personnel will demonstrate full commitment to the magnet schools concept and the success of the project, and they will fulfill their responsibilities to ensure full realization of the MSAP grant purposes and objectives.

Bios and resumes for key personnel are included in this application's appendix. Additionally, job descriptions are included for key positions for which individuals have yet to be hired.

***(d)(1) The Project Director is qualified to manage the project***

*Sandra Wesson, Project Director (In-kind, 0.5 FTE)* The Superintendent has identified Sandra Wesson to assume the responsibilities and role of Project Director. Ms. Wesson is uniquely qualified and well positioned to provide leadership and to bring forward the overarching goals of equity and excellence through the magnet school reform innovations proposed in this project. For the past decade, she has served the District as the Manager of Choice Schools and Programs, acquiring extensive experience and expertise in desegregation strategies and the effective use of magnet schools to promote equity, diversity, and educational excellence. Ms. Wesson served as the MSAP Project Director for the District's 2007-10 MSAP grant project. In this capacity, she effectively managed an \$11.5 million dollar budget to successfully carry out all project activities toward meeting the objectives and outcomes in adherence to the tenets of the grant. She provided leadership for the implementation of three Primary Years Programme (PYP) magnet schools and one Middle Years Programme (MYP) magnet school, and for successfully guiding them through all stages from start-up through authorization as International Baccalaureate (IB) World Schools. During her eighteen-year career in education, Ms. Wesson accumulated hands-on experience with all levels of IB implementation. Early in her career, she was an IB/PYP teacher, PYP Program Facilitator, and PYP Coordinator. Ms. Wesson is recognized internationally for her IB expertise, as she has been called upon by the International Baccalaureate to lead IB authorization and evaluation teams all over the world, as well as to conduct over 50 IB Workshops (Levels 1, 2, and 3, in Assessment, Conceptual Learning, Transdisciplinary Curriculum, Structured Inquiry, and Internationalism). She was also invited to participate in and contribute to the U.S. IB Common Core Summit. Sandra Wesson currently holds the office of PYP Chair on the FLIBS Executive Board for the

Florida League of IB Schools. Ms. Wesson earned a Magna cum Laude Master’s Degree, and holds Florida certification in elementary education, special education, early childhood education, and ESOL.

As Project Director, Ms. Wesson will have overall leadership responsibilities for the development, implementation, and evaluation of all aspects of this project, supporting the principals in the management of significant school restructuring and reform to start new, innovative magnet themed-programs of choice. Already, she has developed a strong relationship and rapport with the principals and staff at the five proposed magnet schools. She will secure highly qualified personnel to carry out project activities, orient project staff, design and facilitate training, and monitor performance at every level. She will promote community involvement and educational partnerships, chair quarterly meetings with the Magnet Advisory Council, ensure that ELL students and students with disabilities are offered equitable opportunities and appropriate services, and monitor all aspects of the student recruitment process and lottery selection. She will work closely with the external evaluator and prepare periodic reports to Magnet Advisory Council, the Executive Director of Choice, and the Superintendent.

***(d)(2) Other key personnel are qualified to manage the project;***

Critical to the success of the MSAP Project is identifying key personnel for the District management team, for the five magnet schools, and externally for evaluation. The chart below provides an overview of these personnel, time on project, and the funding source for each.

SITE	KEY PERSONNEL	EMPLOYMENT STATUS		% TIME	FUNDING SOURCE	
		IN PLACE	TO BE HIRED	ON PROJECT	LOCAL	MSAP
<b>District</b>	Superintendent	X		5%	X	
<b>District</b>	Director of School Choice	X		25%	X	
	MSAP Project Director	X		50%	X	

<b>District</b>	MSAP curriculum specialist	X	100%	X
<b>District</b>	MSAP Recruitment Specialist	X	100%	X
<b>District</b>	MSAP Grant Budget Technician	X	100%	X
<b>School</b>	Magnet School Principals (4)	X	100%	X
<b>School</b>	Magnet Lead Teachers(4)	X	100%	X
<b>2 Schools</b>	PYP STEM Coach (1 for 2 sites)	X	100%	X
<b>2 Schools</b>	MYP STEM Coach(1 for 2 sites)	X	100%	X
<b>School</b>	STEAM /STEM Coach(1)	X	100%	X
<b>District</b>	Ed. Technology Specialist	X	50%	X
<b>District</b>	STEM Curriculum Coordinator	X	10%	X
<b>District</b>	Arts Curriculum Planner	X	10%	X
<b>External</b>	Independent Evaluator (AES)		100%	

Key personnel to be hired through MSAP funds will be highly qualified and selected on the basis of expertise and experience to carry out the magnet project. Under Policy 3.05, the School Board prohibits discrimination on the basis of religion, race, ethnicity, national origin, color, sex, marital status, age, parental status or disability in all employment practices of the District. *The Board also commits to the principle of fostering diversity* to enrich the educational experiences of all students through exposure to adults from many backgrounds, providing educational settings that promote understanding of diversity and contribute to quality exchanges of ideas inherent in the educational setting. All job applicants must submit to fingerprinting, a criminal background check, and a drug test prior to employment with the SDPBC.

**MSAP MANAGEMENT TEAM**

***Curriculum Specialist (to be hired, MSAP Funded, 100% time on project)***

The qualifications for this 12-month position include at least a Master’s degree, Florida certification, successful teaching experience, successful experience in curriculum development/professional development, knowledge of desegregation strategies, and proven

ability to work with diverse groups of people to carry out programs as designed. Preferred strengths include validated leadership skills, human relations, management and budgeting. This individual will have had extensive experience in curriculum design, development, and integration; success working with teachers to implement changes in methods/practices; and experience with or knowledge of magnet schools. This position's responsibilities include working closely with the Project Director, principals, and lead teachers to facilitate the development and implementation of the standards-based thematic curricula and assessments for each magnet school; plan, organize, and schedule professional development activities for the teachers and staff in each magnet school; identify, approve, and order project-related instructional materials; and establish timelines to ensure that sufficient progress is made toward meeting objectives related to curriculum, instruction, and professional development each year.

***Marketing & Recruitment Specialist (to be hired, MSAP-funded, 100% time on project)***

Qualifications include a minimum of a Master's degree, successful teaching experience and/or previous professional experience in marketing, advertising, media, or a related position; and the proven ability to work with diverse groups of people to carry out comprehensive plans as designed. Preferred areas of experience include validated leadership skills, human relations, management and budgeting. The person hired for this position must be creative, energetic, and enthusiastic. Responsibilities include: prepare and carrying out the comprehensive marketing, communications, and student recruitment campaigns annually; develop and train site marketing teams; coordinate recruitment events and strategies to target audiences; produce multimedia marketing materials for the project; design and maintain the MSAP website, Facebook page and Twitter account, and support the redesign and maintenance of school websites; create professional marketing materials for school displays, fliers, brochures, presentations, press releases, and other communication vehicles; monitor all marketing materials to assure

appropriate cultural representation and translations; and monitoring applicant pools for each magnet school and provide weekly updates to the Project Director. If adjustments are needed, the Specialist will plan modifications and add recruitment activities accordingly.

***Budget Technician (to be hired, MSAP funded, 100% time on project)***

The Budget Technician will support the project management team with the management of the budget database, budget reports, inventory systems, ledgers and expenditures, purchase orders, etc. The Technician will promote communications with the public and with the schools, maintain management team and advisory council meeting schedules, maintain project documents and files, databases, statistical data reports, manage incoming student applications, ensure timely responses to public requests, and provide critically important training in *Positive Public Communications* to all clerical or technical personnel in project schools.

**District In-Kind Technology Support**

Upon notification of funding, the Superintendent has identified **Mr. John Long, Education Technology Specialist**, (50% time on project, locally funded) to serve on the MSAP Management Team as the Technology Infusion Coordinator for all five proposed magnet schools. Mr. Long is a technology specialist who is also a certified teacher with classroom teaching experience. He brings to the project a unique and formidable set of skills that together make up a powerful and comprehensive solution to support the magnet teachers in the proposed schools in the area of technology integration, strategies and pedagogy. Mr. Long will provide teacher training in the effective use of the PDD classroom teaching technologies and program management for technology curriculum resources, best practice methodologies, and classroom productivity tools.

**John Long, Educational Technology Specialist** (locally funded, 50% time on project)

Mr. Long has 18 years' experience in education, with the last 16 as an instructional technology curriculum and program specialist, with expertise in digital media, digital design, desktop publishing, data analysis, music, curriculum development and professional development. His has experience with desegregation strategies with his role in the district-wide technology magnet school. Some of his accomplishments include creating the MOD Squad (Multimedia on Demand) which has now grown to a program with 25 trainers and 200 teachers in 108 schools. His work with curriculum development and teacher training focused for 4 years on the Team TLC (Technology + Leadership + Collaboration). Currently, he is part of the *District's eMobilize – Mobile Learning for the Mobile Generation*, to create/implement model, mobile learning environments with hybrid devices such as laptops and PDDs. He has designed curriculum integration and professional development for this technology. Mr. Long's eMobilize initiative was awarded the 2012-13 Apple Distinguished Program. Also, he was awarded the Apple Distinguished Educator Award, the EMA Outstanding Service to Media Award, and he was profiled as Leader of the Year in the June 2008 *Tech & Learning Magazine*. **Role and Responsibilities** - Due to the comprehensive needs of the 1:1 technology infusion model to be implemented in these schools, Mr. Long will be assigned to carry out the technology component and provide the necessary training, on-site modeling, and follow-up for teachers in the magnet schools. Upon notification of funding, Mr. Long will spend 50% of his time on this project, working directly with the vender, District, and schools to support all aspects of the new e-mobile teaching and learning t model to ensure implementation with fidelity. Mr. Long's time will be an in-kind contribution.

The MSAP Management Team, including the Project Director, will report directly to the Director of School Choice, Mr. Pete Licata, who will report directly to the Superintendent for the purposes of this project. As a result, *the MSAP Office will have direct access to the Superintendent in matters related to this MSAP Project.* All District department directors will work collaboratively with the Project Director and principals to develop and implement the innovative, effective magnet school project to support the attainment of all objectives on time.

**District In-Kind Leadership Support**

**Robert M. Avossa, Ed.D., Superintendent of Schools** (locally funded, 5% time on project) – Dr. Avossa was appointed Superintendent in June 2016. Under his leadership, a Strategic Plan has been developed based upon his extensive outreach to the community and a public acknowledgement and analysis of student data showing gaps in student achievement based upon race, socioeconomic, student with disabilities, and English language learner status. The Strategic Plan is committed to the achievement of ALL students. Prior to coming here, Dr. Avossa had accumulated broad experience in supervising magnet and choice schools and a record of tangible success in raising minority student achievement. In his previous position as Superintendent of Fulton County Schools in Atlanta, Georgia, with 96,000 students, graduation rates for all students increased from 70.1% to 78.7%. The African-American graduation rate increased from 58.2% to 67.7%, while the dropout rate decreased from 34.1% to 17.3%. The Hispanic graduation rate increased from 54.3% to 62.1%, while the dropout rate decreased from 36.8% to 24.8%. Dr. Avossa builds consensus with the School Board, community, and staff. He has dedicated his entire career to ensuring that every child is given an opportunity to succeed in college and a career of his/her choice. As a graduate of the Broad Superintendents Academy, he has completed an advanced executive development program that identifies and prepares

experienced leaders to successfully run large urban public education systems. Dr. Avossa has established his reputation as a national leader in personalized learning and competency-based education. He developed a series of digital dashboards designed to allow teachers to make modifications to their instruction, principals to focus on school-level disparities, and District leadership to track progress on predetermined goals. His district-wide initiatives have all had the common goal of focusing the energies of every adult in the district and school community to improve academic achievement levels for all students, thereby narrowing the achievement gap and fulfilling the ultimate purpose and promise of Brown v. Board of Education.

***Pete Licata, Director of School Choice (Locally funded, 15% Time on Project)***

*Pete Licata* has accumulated over 20 years' experience as a teacher, principal, curriculum director, and assistant superintendent. He holds a Master's in Educational Leadership and is pursuing a Doctorate. As an Area Director for Quality Assurance, Mr. Licata led efforts to strengthen inclusive instruction and differentiated instruction in schools, and assisted schools in managing change to deliver instruction to meet the needs of the District's most challenging students. He has led the expansion of virtual education and school choice through the District's very popular Choice Programs and Career Academies. ***In the MSAP Project***, Mr. Licata will supervise and collaborate with the MSAP management team and project school operations, creating a logical link between the school level activities and District leadership initiatives designed to create magnet schools with rigorous and engaged learning environments. Mr. Licata is highly regarded as a transformational leader in school choice initiatives, innovative instruction and community involvement. Under his leadership, underperforming schools have been transformed by highly effective magnet and choice programs, and opportunities for school choice have expanded considerably. In collaboration with the Project Director, the Magnet

Advisory Council, and the Evaluator, Mr. Licata will regularly review the status of the project to ensure that implementation is making adequate progress toward meeting objectives on time and within budget, and that all components are in place for success.

***Site Leadership Team*** - In each magnet school, a site team consisting of the principal, assistant principal, magnet lead teacher, and STEM coach will meet weekly to prepare on-site coordination and plan strategies for successfully carrying out the many activities that will take place on campus for students, for teachers, or for visiting families. The site team will compile, collect, and continuously analyze data and other feedback information related to the magnet program development, as well parental involvement activities, and documentation related to curriculum development and professional learning for all staff. The information will be maintained on site and sent by email monthly to the Project Director for review by the Evaluator

***Magnet School Principals – Qualifications and Responsibilities***

All magnet school principals have met stringent leadership qualifications. They hold a minimum of a Master’s Degree and Florida Certification in Educational Leadership and School Principal. Also, prior to becoming principal, they completed the rigorous 2-year Preparing New Principals program. All principals have completed the *Undoing Racism* summer institute for principals. Additional training that has been required of all principals includes: School-Wide Positive Behavior Support, Marzano Leadership Academy, School Improvement, Response to Intervention, Section 504 and Students with Disabilities, Facilitative Leadership, Closing the Achievement Gap, Efficacy and Culture for Academic Achievement, Continuous Improvement, ESOL Curriculum, and Strategies for Diverse Student Learning. Along with the teachers and staff, the principals will participate in all professional development offered by the project to develop the expertise necessary to move the school toward its goals, and will support the train-

the-trainer teacher model from within the staff to develop on-site expertise. The principal will monitor progress toward meeting annual objectives, and develop on-site strategies for success.

***Gladys E. Harris, Principal, Palmetto Elementary (Locally funded, 100% time on project)***

Ms. Harris is bilingual in Spanish and English, holds a Master’s Degree in Educational Leadership, and has 19 years of experience as a professional educator. Under her collaborative and instructional leadership at Palmetto, student achievement improved and the school moved from a state-designated grade of D to an A. She has expertise in elementary reading curriculum including cross-cultural integration, balanced literacy programs, and ESOL curriculum development, as well as school reform efforts including Response to Intervention. She is a bilingual leader who has a sensitive and knowledgeable approach to cultural and ethnic diversity. Her experience includes curriculum development and implementing desegregation strategies during her seven years of experience as an assistant principal at a magnet school.

***Eric M. Gross, Principal, Grove Park Elementary (Locally funded, 100% time on project)***

Mr. Eric Gross holds a Master’s Degree and Florida certification as K-12 principal. He has 18 years of successful experience in education, including 8 years as an elementary school principal. The majority of his career has been spent in teaching and administration at low income, high needs schools. He has been a principal for 8 years, with the most recent 6 years at Grove Park Elem., during which time he was honored by his peers as the Elementary School Principal of the Year. During his years at Grove Park, Mr. Gross has provided the leadership to realign curricular resources in his school and establish intervention programs providing differentiated levels of support for high needs students. His experience includes curriculum development and 2 years of experience in desegregation strategies as the principal of an elementary magnet school.

***Kiwana Alexander Prophete, Principal, Carver Middle (Locally funded, 100% time on project)***

Ms. Prophete is well qualified to transform Carver into an STEM infused IB Magnet School. She is an instructional leader who is bilingual in Haitian Creole and specializes in Secondary Curriculum development. She was a finalist for the 2015 Leonard C. Millet Leadership Award from the Council for Education Change. She holds a Master's Degree in Organizational Leadership. Student achievement at Carver has improved under her leadership in reading, mathematics, science, and civics. She has increased professional learning communities at her school, fostering interdisciplinary teaching and learning related to Florida Standards.

***Dr. Donald Hoffman, Principal, H.L. Watkins Middle (Locally funded, 100% time on project)***

Dr. Hoffman brings to this project an exceptional background in academics and professional experience. He holds a Master's in Mathematics and a Doctorate in *Educational Leadership*, with his published dissertation on Raising Reading Achievement. Dr. Hoffman has 15 years' experience as an educator, and prior to his current position, as principal of a school in arguably the most economically depressed part of Florida. He was awarded Administrator of the Year for Character Counts, and was a finalist for the prestigious PBC Dwyer Education Award. Mr. Hoffman is experienced and knowledgeable in magnet school desegregation strategies. He has developed curriculum for middle school algebra, and for high school math and science.

***Denise T. O'Connor, Principal, Congress Middle (locally funded, 100% time on project)***

As a highly successful principal who was recognized by the Florida DOE as a Turn-Around Principal of the Year, Ms. O'Connor was asked by the Superintendent to bring her leadership expertise at turning around schools to Congress Middle School. Ms. O'Connor, who also speaks Spanish, holds a BS in Special Education and an MS in Educational Leadership. Her experience as a professional educator spans 19 years, during which time she has been a classroom teacher of students with disabilities, an assistant principal, and a principal of elementary and middle

schools. As a teacher coach, she worked on curriculum development teams and was twice a finalist for the prestigious PBC Dwyer Award (Excellence in Teaching). As a principal, she has experience with the magnet program curriculum development, as well as with desegregation strategies as a magnet school principal. She also serves as a Mentor for New Principals.

**Project Independent Evaluator - American Education Solutions (AES)** The SDPBC will contract with American Educations Solutions (AES) to evaluate this project. A work plan for this project's evaluation is included in *Selection Criteria E: Evaluation Plan* in the project narrative. For the past 20 years, AES has provided comprehensive evaluation services for fifty-one (51) Magnet Schools Assistance Program (MSAP) grant projects. In addition, the AES team has partnered with the Education Alliance at Brown University and the SERVE Center at the University of North Carolina on 20 rigorous MSAP evaluations. In the 2010-2013 cycle, AES partnered with the National Center for Research on Evaluation, Standards, and Student Testing (CRESST) at UCLA on survey development and analysis. The AES MSAP site visit team for formative evaluations includes former magnet school teachers and administrators, including an assistant superintendent, four magnet school principals, two magnet school directors and Equity Assistance Center director. The duties of the evaluators are described in the evaluation section.

### ***(d)3 Teachers are qualified to implement the special curriculum ...***

The quality and professionalism of the instructional staff will be the basis for success for each magnet school. The teachers currently assigned to the proposed magnet schools have expressed support and willingness to be part of the project, as illustrated by *school agreement/commitment letters with signatures of teaches and staff* (see appendices). Upon notification of funding, a concerted effort will be made to communicate the high level of expectations for all participating teachers and to ensure that these teachers are truly ready and willing to make the

full commitment to the magnet school concept. To be part of the new magnet school, all staff assigned to these schools will be expected to exhibit enthusiasm at the challenge of collaborating with colleagues to totally convert the school. They must make a full commitment to the extra effort and time required to plan, collaborate, develop curriculum, provide individualized instructional support for students, co-teach at times, and engage in at least the required 100 hours of professional learning annually during the MSAP project period. If any teachers cannot make this commitment, the CTA Collective Bargaining Contract, Section IV (F)(2) states: “If a school is going to become a ‘magnet school,’ those employees not wishing to remain at that school shall be treated like any other UAT employee....The Department of Recruitment & Retention (DRR) shall strive to place all UAT’d employees within fifteen (15) days. When making such placements, the DRR shall strive to consider the wishes of the affected unplaced employee.” The DRR will ensure teachers who cannot commit to the magnet school concept will be treated fairly and sensitively, and transferred to a position as similar to their current one as possible. For teacher openings in the magnet school, the principals and Project Director will seek highly effective teachers (from inside or outside of the District) who have demonstrated knowledge and innovative teaching skills, and who are energetic and enthusiastic about the opportunity to make the full commitment to the magnet school concept. These will be teachers who set high expectations and inspire their students to learn.

**MAGNET SCHOOL TEACHERS**

<b><i>Magnet Lead Teachers- 10 mo. position(MSAP funded, 100 % time on project, to be hired)</i></b>
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Upon notification of project funding, one lead teacher will selected for each of the five magnet schools. <b><i>Qualifications:</i></b> The lead teacher will be a highly effective and qualified teacher with a minimum of five years successful classroom experience, Florida educator certified with a
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minimum of a Master's degree, experienced in curriculum development, highly trained, knowledgeable in desegregation strategies; demonstrated ability to work with diverse populations; dedicated to student achievement and committed to the success of the magnet school project. **Responsibilities:** The lead teacher will assist the principal with all aspects of magnet planning, development, implementation, and monitoring progress toward meeting project objectives; provide facilitative leadership to teacher curriculum teams; work closely with the curriculum specialist to ensure that curriculum development and instructional delivery meets the requirements of the project; plan and actively participate in the project's professional development and provide continuous follow-up training through professional learning communities and other formats to ensure teachers have the collegial support necessary to carry out the curriculum with quality and fidelity.

***STEM Coach- 10 mo. position (MSAP Funded, 100% time on project, to be hired )***

Upon notification of funding, three STEM coaches will be hired for the project. One will be assigned to Congress STEAM Academy full time; one will be assigned to the IB/PYP Magnet Elementary Schools at Palmetto and Grove Park; and one will be assigned to the IB/MYP Magnet Middle Schools at Carver and H.L.Watkins. **Qualifications:** The STEM Coach will hold a minimum of a Bachelor's Degree, Florida certification, and a minimum of five years successful teaching experience in Science, Technology, Arts, or STEM/STEAM curriculum. The Coach will have experience in training teachers, evidence of effective communication skills, ability to work with diverse groups, and committed to the success of the magnet schools. **Responsibilities:** The STEM Coach will work with each teacher to document the required 50 hours of follow-up, job-embedded professional learning. The STEM Coach will lead the coordination and integration of STEM curriculum development and implementation, and provide the teachers (individual and

group) with coaching, mentoring, modeling, demonstration lessons, inquiry and reflection, data analysis, differentiation of lesson plans, leading PLCs, co-teaching effective instruction for teachers, and ensures optimal use of educational technology throughout the curriculum.

***Magnet Classroom Teachers – (100% Time on Project; Locally Funded)***

Magnet teachers will be highly qualified, FL-certified, and highly trained professionals who have experience working with diverse student populations. Teachers and counselors will be involved in curriculum development by serving on instructional innovation teams. Magnet teachers must exhibit qualities that inspire and motivate students, including enthusiasm, energy, commitment, and a passion for teaching. Through extensive, ongoing professional development and follow-up training, teachers will continuously build expertise to implement the innovative curriculum and effectively deliver specialized instruction to meet the needs of all students.

**(e) QUALITY OF PROJECT EVALUATION (10 Points)**

***(e)(1)Methods for examining effectiveness of project implementation strategies: (2)Objective performance measures relate to intended outcomes and produce quantitative and qualitative data; (3)Provide performance feedback/periodic assessment of progress toward achieving outcomes.***

The SDPBC will contract with the firm of American Education Solutions (AES) as the external, independent evaluator for this project. This evaluation, spanning the three years of the project, will assist school staffs and district personnel to modify and improve project performance and produce information needed by the USDE to properly evaluate project effectiveness.

**Data Collection:** This evaluation will draw on a wide variety of data to provide substance and context for both formative and summative reports. Quantitative, extant data (e.g. enrollment information, student demographics and standardized test results) will be used in conjunction with student and teacher surveys, as well as with qualitative data (e.g. interview and observation data, school improvement plans, curriculum materials, professional development records) to ensure a

thorough and balanced evaluation. The evaluator will develop a complete set of data collection instruments (including surveys, document requests, and walkthrough, observation and interview protocols) designed to provide sufficient information to address objectives and performance measures and supplement extant data. However, extant data will be used whenever possible to lessen the burden on school and project staff. *The data to be collected will include:*

**Student academic achievement, demographic, enrollment and other Data:** The contractor will collect standardized test score data (e.g., school, grade and class level and student English language arts, mathematics, science data) needed to address performance measures related to student academic achievement. Enrollment data disaggregated by race/ethnicity and socioeconomic status data (students eligible for free or reduced lunch) collected by the district will indicate the extent to which each school and the project succeeds in meeting desegregation related performance measures, including reducing minority group isolation and increasing socioeconomic integration. Applicant pool, student selection and student enrollment data will help explain the extent to which the reduction in minority group isolation and the increase in socioeconomic integration performance measures were attained and help determine how performance in this area can be improved.

**Document requests:** The evaluator will request documentation from magnet school teachers and MSAP staff to help determine the quality and extent of MSAP implementation. Examples include: ► **descriptions of and dosage** (amount of program delivered) **for units and courses** that present the magnet theme to students; and student recruitment, teacher professional development, parent involvement and planning activities (including an implementation plan); ► **schedules** of school based magnet staff; ► School improvement plans.

**Observation and interview Data** will be collected, during three annual visits to each magnet school, by the trained AES evaluation team members with extensive experience as magnet school practitioners. During each visit, evaluator will conduct a walkthrough, observe lessons, and interview teachers, administrators, students and parents. Evaluators will develop an open-ended interview protocol to determine participants' perceptions of their schools, their leadership team, their faculty, and the contextual environment that surrounds their school and community. These semi-structured interviews will allow participants to reflect on their experiences in their school generally, with a particular focus on what works and what needs improvement. Interviews will be recorded (with permission), transcribed and coded by the evaluators. Combined with other data (e.g., surveys, observations, documentation), they will help assess progress toward benchmarks and performance measures

**Surveys** will be administered annually to all teachers at each magnet and comparison school and a sample of students (one complete grade) at each magnet and comparison school. Comparison schools will be selected based on school size, grade span, and school-level student achievement and demographics. Drawing on its 20-year history of MSAP and regular and rigorous evaluations, American Education Solutions developed survey items and scales with its survey consultant, Dr. David Silver, a senior researcher at UCLA's CRESST Center, and currently, Dr. Jia Wang, a senior research scientist at CRESST. *These survey items are directly related to the purposes of the MSAP and the logic model, objectives and performance measures of this proposal.* Validated survey items and scales measure constructs including school climate, instructional leadership, professional development hours (formal, collaborative and coaching) and effectiveness, student engagement and motivation, student academic commitment and expectations, student and teacher perceptions of intergroup relations and magnet theme

implementation, standards based instruction and systemic reform implementation and parent involvement, teacher insights of what works, what is missing, and areas of improvement, as well as magnet-specific professional development dosage.

Because improvement of curriculum and instruction and the development and integration of the magnet theme, both supported by intensive professional development, are key components of this project design (as reflected in the logic model), fidelity of implementation related to curriculum will include examination of the gap between the intended curriculum—as presented in curriculum materials and professional development—and the enacted curriculum (as seen in classrooms). Examining this gap will help determine if professional development activities are effective in developing and integrating the magnet theme to improve classroom curriculum and instruction and if increases in student test scores might be attributable to project professional development. Fidelity of implementation of professional development and curriculum and instruction will be determined through teacher interviews and surveys, classroom observations, unit analysis by project staff and evaluators, documentation of peer reviews of units and examination of the intended curriculum documents delivered by professional development providers and the district.

**Formative Evaluation Reporting:** Data will be collected, as available, and analyzed, and recommendations will be discussed with the Project Director and school staff throughout the year.

*Five formative evaluation reports will be written by evaluators each school year:*

**Reduction of Minority Group Isolation (MGI) Report:** Demographic and enrollment data will be compared with applicant pool, student selection and other data from the previous school year and with performance measures. By November, discussions related to the attainment or

partial attainment of performance measures related to the reduction of MGI will help the district and magnet schools modify recruitment strategies and activities to attain better results. This report is updated in late spring when new applicant pool and student selection data is analyzed and compared with school enrollment data to determine the success of these activities and create plans of action to improve results, if necessary. Measures of fidelity include adherence to recruitment plans and student selection procedures; and dosage, the “amount” of recruitment. Quality and responsiveness will be determined by changes in school enrollments, especially for entry grades, and the size and diversity of applicant pools.

**Site Visit Reports** provide feedback based on data related to project development and implementation. *After each of three annual site visits, a report will be written by the site visitor and submitted within ten days.* It will summarize the findings of the visit and include recommendations for improvement. Site visitors will discuss proposed recommendations with school and MSAP staff during each visit. **Documentation Reviews**, included in all three site visit reports, will summarize descriptive and quantitative data related to magnet curricula, systemic reforms, parent activities and professional development, and report on: adherence (e.g., activities implemented on schedule), dosage (e.g., amount of time students, teachers, parents are exposed to grant activities such as magnet units and courses, professional development, parent activities), quality (e.g., peer reviews of magnet related units). The combined site visit report/documentation review summarizes how much progress has been made toward attaining performance measures, especially those related to magnet theme and systemic reform (including improvement of curriculum and instruction) implementation (2.1, 3.1), professional development (5.1-5.2) and fidelity of implementation. The reports, distributed to and discussed with school staff three times per year, help them understand if they are on track to attain intended project

outcomes, including performance measures and if not, why and how the activities can be improved.

**Survey Reports** will include item-by-item results for each school, summaries of survey construct results for each school, and, for years two and three, comparisons between current and the previous year's results. Trends (e.g., relationship between magnet implementation and student engagement and motivation, between professional development dosage and impact) are explored.

*Other formative evaluation strategies include:*

**Short Term Outcomes.** *Benchmarks are measures of short term outcomes* that indicate whether adequate progress is being made toward the attainment of annual performance measures. Most are derived from site visit report or survey items. Since surveys are administered in the spring of each year, these benchmarks, reported by the end of each year, can help the Project Director make adjustments by the beginning of the following school year. Site visit items (e.g, professional development and curriculum dosage, quality indicators) are reported and reviewed with schools three times each year. *The most critical benchmarks are included in the performance measure section which follows.* The Project Director and evaluator can decide on additional benchmarks, derived from site visit or survey items that could be helpful guides to one or more schools. Desegregation benchmarks are derived from applicant and enrollment data. The degree to which benchmarks are attained will be reported in the site visit and survey reports.

**Implementation Strategies:** Fidelity of implementation may be affected by the complexity of the project or intervention. Learning the program and each of its components through intensive professional development and receiving implementation support from project staff (e.g., coaching, demonstration lessons, resource support), colleagues (e.g., unit quality peer review, collaboration, intervisitations) and evaluators (e.g., site visit and other formative reports

and feedback including progress on benchmarks) is essential and will occur as previously described. Additional strategies to improve fidelity of implementation include:

**Peer review of unit quality:** Each school will create a unit quality rubric, with guidance of the Project Director, magnet curriculum specialist, and STEM coordinator. All units must be reviewed and meet the quality criterion. Review sessions will include teachers' discussions of units. The rubric also provides a school-wide structure for inter-visitations and unit development.

**Review of site visit reports and recommendations:** Site visit reports will be reviewed by each school, findings discussed with staff, and recommendations implemented. Fidelity of Implementation will be monitored/reported during each site visit, as will each school's peer review of units, implementation plan, review of previous report, progress made on implementing recommendations. *A similar review process will be implemented for the findings of the surveys.*

The ultimate effectiveness of the implementation and implementation strategies will be determined by the extent to which project outcomes will be attained, including reduction in MGI, improvement in socioeconomic integration and test score improvement, and statistically significant improvements in test scores for students attending magnet schools when compared with carefully matched non-magnet school students (quasi-experimental analysis of test scores by the Center for Research on Evaluation, Standards, and Student Testing (CRESST) at UCLA.

**Summative Evaluation and Reporting:** The evaluator will determine the extent to which annual objectives and performance measures (medium term outcomes on the logic model) are attained. Data sources were described above. The evaluator will collect and analyze the data, prepare two annual performance reports (APRs) and one final report, summarizing findings, and discuss results with district and magnet school staffs.

**PROJECT OUTCOMES** are aligned with the six MSAP Purposes and the logic model. Objectives and performance measures follow each MSAP Purpose and logic model activity. Benchmarks (short term outcomes) determine if adequate progress is made toward meeting objectives. Medium term outcomes are annual performance measures, and long term outcomes (as shown on the logic model) are year 3 performance measures --- outcomes for the entire project period.

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**MSAP PURPOSE 1: The elimination, reduction, or prevention of minority group isolation in ... schools with substantial portions of minority students**

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**Logic Model Activity:** Desegregation–Student recruitment, application, selection activities;

**Benchmark:** For the applicant pool, the proportion of isolated students 10 percentage points less than actual enrollment for each school. All proposed magnet schools will reduce MGI and increase socioeconomic integration by attracting additional students to the schools which will decrease the proportion of Black or Hispanic students and increase the proportion of students who are not on the federal lunch program. The percentage of Hispanic students (Palmetto ES) or Black students (Grove Park ES, Carver MS, Congress MS, Watkins MS) are significantly greater than the district average of Black students (29%) and Hispanic students (32%). The proportion of low SES students at each school is significantly greater than the district average of 56%.

**Objective 1.** Minority group and socioeconomic isolation will be reduced at the proposed magnet schools. (*This objective addresses MSAP GEPR A Measure a.*)

**Performance Measure 1.1-1.5:** By September 30 of each project year, approved enrollment targets for each racial/ethnic will be attained by reducing isolation of Black or Hispanic students by *at least 3 percentage points by year one, 6 percentage points by year two, and 9 percentage points by year three* at each magnet school. The schools and enrollments are:

**1.1 Palmetto Elem.(K-5)** Reduce proportion of minority group isolated Hispanic students by 3 percentage points per year (9% Black, **81% Hispanic**, 8% White, 2% other. **Low SES: 97%**);

**1.2 GrovePark Elem (K-5)** Reduce proportion of minority group isolated Black students by 3 percentage points per year (**67% Black**, 22% Hisp., 6% White, 5% other. **Low SES: 93%**)

**1.3 Carver Middle (6-8)** Reduce proportion of minority group isolated Black students by 3 percentage points per year (**76% Black**, 13% Hispanic, 7% White. 4% other. **Low SES: 86%**)

**1.4 H.L. Watkins Middle(6-8)** Reduce proportion of minority group isolated Black students by 3 percentage points per year (**71% Black**, 13% Hisp., White 9%, 7% other. **Low SES: 88%**)

**1.5 Congress Middle(6-8)** Reduce proportion of minority group isolated Black students by 3 percentage points per year (**62% Black**, 22% Hisp., 9% White, 7% other. **Low SES: 87%**).

**1.6:** By September 30 of each project year, the proportion of low SES students at each magnet school will be **reduced by at least 4 percentage points** compared with the previous year. (A low SES student in the SDPBC is defined as a student who is eligible for free or reduced lunch.)

**1.7:** For each project year, each elementary magnet school will receive a minimum number of applications, as follows: at least 65 applications in year 1; 75 in year 2; and 85 in year 3.

**1.8:** For each project year, each middle magnet school will receive a minimum number of applications, as follows: at least 75 applications in year 1; 85 in year 2; and 100 in year 3.

**Assessment:** School enrollment data, disaggregated by race/ethnicity and socioeconomic status will help determine the degree of attainment of 1.1-1.6. Each year (September 30), the percentage of students in the isolated racial/ethnic group and low SES students enrolled in each school will decrease. Baselines are 2015-16 school enrollments. School census data is maintained by the SDPBC Education Data Warehouse. Applicant pools and student selection data is maintained electronically. At three designated times during each year, Project Director

and MSAP staff will determine if **1.7** and **1.8** will be attained and explore just-in-time modifications to recruitment plan as needed. Each spring, MSAP staff will explore how outcomes can be improved for all measures.

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**MSAP PURPOSE 2: To develop, implement, expand magnet schools that will assist LEAs achieve systemic reforms/provide all students opportunity to meet State Standards.**

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**Logic Model Activity:** Improve Curriculum, Instruction & Student Academic Supports

**Benchmark:** 85% of teachers at each school agree that a moderate or a great deal of emphasis (as opposed to no or little emphasis) was placed on (a) alignment of magnet curriculum content and assessments with FL Standards and NGSS; (b) design of professional development linked to Florida Standards; (c) data based decision making; (e) At least 85% of teachers teach content or skills using PBL or other structured group learning daily or weekly. (Survey results.)

The implementation of improved thematic curricula, instruction and student academic supports for systemic reform will be facilitated and supported by the MSAP Staff and school leadership team. Teacher teams will write thematic curriculum units in all core academics during planning time in school, supplemented with after school and summer sessions.

**Objective 2:** All students will receive instruction that includes their school's systemic reforms and magnet themes in units and courses aligned with CCSS, NGSS and State standards.

**Performance Measures: 2.1** By September 30 of each project year, at each magnet school, at least 33% (year 1), 66% (year 2) and 100% (year 3) of all core academic subject units will meet district, school and project quality criteria determined by peer reviews using a unit quality rubric.

**Performance Measure 2.2:** By September 30 of each project year, each magnet school will submit (electronically) to the Project Director an magnet curriculum document, aligned with state standards, that includes peer reviewed units for challenging instruction and interdisciplinary

projects demonstrating high expectations for student learning and academic performance, as documented annually by an analysis of each school's living magnet curriculum document.

**Assessment:** Unit quality rubrics will be designed by each school with the assistance of the curriculum specialist. Passing scores will be determined. Reviews will occur 2-4 times per year as determine by each school's planning committee. Since this is a peer review process, teachers will review each other's units. Magnet lead teachers will facilitate. Baseline is zero for 2015-16. The percent of units meeting quality criteria increases each year.

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**MSAP PURPOSE 3: Development, design, expansion of innovative educational methods and practices that promote diversity/increase choice in elementary and secondary schools...**

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**Logic Model Activity:** Magnet Theme Integration

**Benchmark:** (a) Dosage for implemented and planned units attains target number of hours each year (checked during each site visit.) (b) See Benchmark for MSAP Purpose 2. (c) Student surveys indicate an increase in engagement, motivation, academic commitment, interest in magnet theme each year (year 1 is baseline). 90% students find magnet theme interesting and challenging Magnet Theme Integration, Improvement of Curriculum and Instruction and intensive Professional Development will produce high quality magnet curriculum and instruction which will increase student diversity and choice because the curricula are not offered at other schools.

**Objective 3.** All students, at each magnet school, will receive magnet theme instruction.

**PM: 3.1** By September 30 of each project year, *all students*, at all magnet schools, will receive magnet theme instruction every week, coordinated with or including systemic reforms *for at least 5 hours (year 1), 10 hours (year 2) and 15 hours (year 3) per week.*

**3.2** By September 30 of each project year, all teachers in each magnet school will demonstrate the effective use of the personal digital device for instruction through development/implementation of an increasing number of quality technology-infused units and projects each year, as determined by unit plan analysis, surveys, interviews, walkthroughs, digital portfolios.

**3.3** By September 30 of each project year, all students will gain STEM knowledge and understanding by engaging in digital learning activities with a ‘real world’ context, as reflected through the digital learning portfolio artifacts.

**3.4** By September 30 of each project year, the schools implementing the IB themes will complete the annual IBO requirements for authorization by the end of the project, as evidenced by confirmation of submission of appropriate materials to the IBO (years 1 and 2) and official

**Assessment:** Success will be determined, by the evaluators, through unit plan analysis and confirmed with interviews, and walkthroughs (3 times per year) and surveys. Unit summaries are submitted by each school 3 times per year. Entire units are made available by school (magnet lead teachers) to evaluators (on-line access) on a continuous basis. The dosage is the average number of hours that each student receives magnet theme-related instruction through discrete (magnet theme) classes and integrated units per week. Dosage is reviewed throughout each project year to determine if the schools are on target for reaching curriculum goals. The baseline is zero for 2015-16. The number of hours will increase each year to meet the target..

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**MSAP PURPOSE 4: Courses of instruction in magnet schools will strengthen knowledge of academic subjects and attainment of...career, technological/professional skills of students...**

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**Logic Model Activities:** All activities.

**Benchmarks:** See Benchmark for MSAP Project Purposes 2, 3, 5 and 6.

The State administers the Florida Standards Assessment (FSA) in English language arts (ELA) and mathematics to students in grades 3-8. In addition, Florida administers the Statewide Science Assessment (SSA) to students in grades 5-8. Each year, the State determines the percentage of students reaching proficiency (identified as % satisfactory – level 3 or above) for ELA, math, and science. This data is provided for All Students and for each of the following subgroups: Black/African-American, Hispanic, Asian, White, American Indian/Alaskan Native, Economically Disadvantaged, Students with Disabilities, and English Language Learners. Further, the State assigns each school a School Grade. Each school is rated based on percentages of students scoring at level 3 or above on the FSA in ELA and mathematics, as well as learning gains made by all students and learning gains made by students in the lowest 25%. This produces a scale score of up to 800 points for elementary and 900 points for middle. The score is then translated into a School Grade, ranging from A to F.

**Objective 4:** At each magnet school, student academic achievement will increase each year in English language arts, mathematics, and science for the total population and for students in each major ethnic and racial subgroup. The percentage of students from ethnic and racial subgroups attaining a score of Satisfactory or above on the Florida Standards Assessment will increase.

**Performance Measures:** (*Measures 4.1 and 4.2 address MSAP GEPRAs Measures b and c*)

**4.1-4.2:** By September 30 of each project year, the percentage of "All Students," students from each major racial/ethnic group, and low SES students who score at level 3 or above on the FSA will increase when compared with the previous year: **4.1** English language arts; **4.2** mathematics.

**4.3:** By September 30 of each project year, the percentage of "All Students," each major racial/ethnic subgroup, and low SES students who score level 3 and above on the Statewide Science Assessment will increase compared with the previous year at each magnet school.

**4.4:** By the end of the project (year 3), each magnet school will increase its School Grade score, when compared to the baseline of 2015-2016.

**4.5:** By the end of the project (year 3), 75% of students at each magnet school will develop mastery of the magnet curriculum, as determined by project based assessments scored by rubrics.

**Assessment:** All students are tested in April of each school year. Data is analyzed by the Florida DOE and made available to school districts. This data will be presented in the Annual Performance Reports in tabular form, highlighting the performance targets and how each magnet school – both in aggregate and by subgroups – performed in relation to these targets. Baselines are 2015 scores and school grades. Project based assessments (performance measure 4.5) will be developed in year 1 for each grade by the magnet lead teacher, STEM coach, and classroom teachers with support of the MSAP curriculum specialist. Rubrics will be used in years 2 and 3 by teachers at least twice per year and be approved by the principal, Project Director, and the Director for Curriculum and Instruction. The 2015-16 baseline of zero will increase each year.

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**MSAP Purpose 5: Improve capacity of LEA, through professional development, to continue operating magnet schools at a high performance level after Federal funding...is terminated.**

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**Logic Model Activities:** Professional Development (PD)

**Benchmarks:** (a) PD supports all grant activities, uses expert presenters and a variety of delivery methods. (b) The sum of annual implemented and planned PD dosage attains target. (a and b checked during each site visit.) (c) Unit quality rubric reviews and class observations will confirm that teachers are implementing what they learned from PD in their classroom. (d) At least 85% of teachers will agree with these survey items related to PD: *(i) helped me integrate the magnet theme into lessons; (ii) deepened my content knowledge; (iii) helped me better maintain student engagement; (iv) I use what I learned from PD in my classroom.*

**Objective 5.** Provide professional development related to the magnet theme development and integration for improvement in curriculum and instruction.

**PM 5:** By September 30 of each project year, magnet school teachers at each magnet school will participate in at least 50 hours professional development (i.e., workshops, courses, etc.) directly related to magnet theme development and integration for improvement in curriculum and instruction, and at least 50 hours embedded professional learning (i.e., coaching, modeling, practice, feedback, PLCs, etc.) to enhance transfer of learning to implementation in the classroom. Other performance measures related to capacity building include: (2.1, 3.1) develop/implement systemic reforms and magnet theme units. **Assessment:** Magnet Lead Teacher and STEM Coach at each school will collect PD data, including the number/names of teachers involved, number of hours, type of training or professional learning activity, and summarize as it occurs to be checked 3 times per year by the evaluator and Project Director. Attendance sheets and data, agendas, workshop materials, PLC schedules, and the log of the instructional coach will be available at each school and checked by the evaluator and Project Director. *The target is 100 hours per teacher per year*, including workshop sessions, follow-up coaching, and teacher collaboration (e.g., PLCs, intervisitations). Quality will be determined through survey analysis, interviews and class observations. The 2015-16 baseline is zero. Each year, targets will be met and/or number of hours will increase to target.

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**MSAP PURPOSE 6: Ensuring that all students enrolled in the magnet school programs have equitable access to high quality education that will enable the students to succeed academically and continue with postsecondary education or employment.**

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**Logic Model Activities:** Parent Involvement and all other logic model activities

**Benchmarks:** The degree to which: (a) parent activities described in the proposal are being implemented; (b) all classes reflect the racial/ethnic composition of the school.

**Objective 6a:** All project school students will have equitable access to high quality education.

**P M6.1** By September 30 of each project year, for each magnet school, student enrollment in all STEM classes at Congress Middle School will reflect that school's enrollment for major racial/ethnic groups (Black, Hispanic, White) and gender by  $\pm 15$  percentage points.

(Year One: at least 70%, Year Two: at least 75%; and Year Three 80% )

**PM 6.2** By September 30 of each project year, student enrollment in all World Language classes at Grove Park Elementary, Palmetto Elementary, Howell L. Watkins Middle, and Carver Middle School will reflect that school's enrollment for major racial/ethnic groups (Black, Hispanic, White) and gender by  $\neq 15$  percentage points, as verified by an analysis of enrollments disaggregated by race/ethnicity/gender.

(*Year One:* at least 70% , *Year Two:* at least 75%, *Year Three:* at least 80%)

**Assessment:** Success will be determined by analysis of class enrollments disaggregated by race/ethnicity and gender. Please see assessment for measures 1.1- 1.6. Baselines are 2015-16 enrollments. The % of classes meeting the criteria increase each year.

*Parent involvement* also promotes equitable access to high quality education for all students.

**Objective 6b:** There will be an increase in parent participation at each magnet school.

**PM 6.3** By September 30 of each project year, for each magnet school, the numbers of parents who participate in school activities will increase (compared to previous year). **Assessment:** Workshop materials, attendance records and parent interviews will determine parent participation and satisfaction, to be collected by the magnet lead teachers as sessions occur, summarized, and submitted to evaluators and the Project Director 3 times per year. Baseline: 2016-17. Number of parents involved in school activities will increase in years 2 and 3.

**Annual Evaluation Schedule:** ► Initial meeting with project and district staff (Week 1);  
► Refine data collection instruments and plan; refine analysis plan (Weeks 1-3); Collect data

(Throughout year): Enrollment data (Week 6); Documents collected (e.g. units integrated with magnet theme - Weeks 14, 28, 49); Site visits including interviews and observations (Weeks 15, 29, 50); Site Visit-Documents Review Reports (Weeks 17, 31, 52); applicant pool data (Week 31); Dosage data (ongoing); Surveys administered (Week 33-35); Survey results reported (Week 40); ► Formative evaluation including discussion of recommendations (Weeks 3-50); MGI Report (Week 9); MGI/Applicant Pool Update (Week 31); ► Analyze and process summative data (Weeks 30-32 and 50-52); ► Prepare Annual Performance Report and Ad Hoc Summative Report (Weeks 30-32 and 50-52); ► Submit APR and Ad Hoc reports to District (Weeks 33 and 52).