

2009-2010 Summaries

Challenge Grant for the Gifted

Collaborative Curriculum Projects

This publication is available through the Florida Department of Education designed to assist school districts, state agencies that support educational programs, and parents in the provision of special programs. For additional information on this publication contact:

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Introduction

The Challenge Grant Program for the Gifted was established in 1981 to encourage public schools and districts to implement exemplary programs that appropriately challenge gifted students. Projects funded under this program are designed to improve the quality of existing programs, initiate a model or demonstration program, or expand student participation in existing programs. Project activities support the improvement and further development of provisions for enhanced and more rigorous curriculum and services for gifted students in a school, district, or group of districts.

Since 1981, funds for the Challenge Grant have been awarded on a competitive basis for local district projects that address identified priority areas. The purpose of this funding project was to support innovation to meet the instructional needs of gifted students.

The Sunshine State Standards identify complex classroom objectives for all students that likely require a redesign of instruction to ensure that the needs of the gifted learner are being met. Furthermore, gifted students often have deeper interest in a topic that may go beyond traditional classroom instruction or resources.

The Collaborative Curriculum Projects are intended to enhance the academic achievement of gifted students through the innovative redesign of instruction and collaboration. Collaboration is defined by the Merriam Webster On-line Dictionary as working jointly with others or together in an intellectual endeavor. This requires intellectual engagement beyond audience participation. It is expected that this collaboration will enhance instructional strategies and thus the academic performance of the students by introducing new information, skills, talents, and perspectives. It is expected that collaboration will go beyond traditional classroom methodologies.

Further collaboration may be coordinated with

- general education classrooms
- classrooms for students with disabilities
- other schools or school districts
- colleges and universities
- professionals in a particular field who are willing to become mentors and share expertise
- museums
- laboratories

These collaborative projects may involve face-to-face interaction or coordination through the use of technology such as the internet.

Funds are provided primarily for curriculum development, instructional planning, and the implementation of redesigned curriculum. However, funds may also be used for professional development (including release time for planning or training in an innovative or exemplary program) and resources not currently provided by the school district that are necessary to meet instructional objectives or to provide current research and information related to effective gifted education. .

Grants were awarded for ten projects for the 2009-10 school year. Participation in this project is open to all school districts in the State of Florida. Funding is competitive and based on the recommendations of a review team.

The purposes of this publication are to provide information to Florida school district administrators and teachers about the grant opportunity, and share information about the grant projects that have been funded.

Information about each project was submitted by the project director and is presented in the following format:

I. Project Rationale and Goals

Describe the need for the program

II. Project Implementation

What was taught? How was it taught? What learning experiences were provided? Clarify how this was a redesign on instruction.

A. Project Activities

B. Curriculum Content Focus

C. Next Generation Sunshine State Standards Addressed

D. Instructional Methodology Used

E. Nature of the Collaboration

Describe the collaborative activities and their purpose and a roster of participants and personnel involved. Clearly describe the student population in terms of how many met gifted eligibility and at what grade levels. How many students took part? Describe the role of other participants.

III. Evaluation

How were students assessed? What were the results? What was the impact on participants?

How was the project evaluated? What were the results? Identify why or why not outcomes were achieved. Describe any continuation plans.

A. Assessment of Student Performance

B. Project Evaluation

IV. Dissemination

How was information about the project and the results disseminated? What was the audience?

V. Budget

Specify items in the program budget and how it was used.

VI. Contact Information

For further information about the Collaborative Curriculum Challenge Grants Projects, please contact the Florida Department of Education, Bureau of Curriculum and Instruction, 424 Turlington Building, 325 West Gaines Street, Tallahassee, Florida 32399, Phone: (850) 245-0423, Fax (850) 245-0826.

Alachua County School District

Project Title: *Rural Globalization Through Technology*

I. Project Rationale and Goals

A. Project Rationale

Rural Globalization Through Technology (RGTT) was designed to permit gifted students to engage in advanced levels of inquiry and facilitate collaboration throughout the school year between students and professionals in a number of scientific, artistic, and humanities-related fields. The project design emphasized the expansion of gifted student's experiences outside the traditional classroom, both physically and electronically, through face-to-face interactions and by further integrating technology into the curriculum. RGTT was designed to infuse technology into the teaching and learning process in ways that have not been previously accomplished.

B. Project Goals

Goal 1: Increase student academic performance as measured by FCAT and district on-track assessments.

Goal 2: Enhance gifted students' abilities in using technology to collaborate; to communicate; to propose, assess, and implement solutions to real-world problems.

Goal 3: Increase students' awareness of careers as they relate to academics and school activities.

Specific goals related to needs of Gifted Learners: (from Alachua County gifted goals manual)

Goal 1: Higher Levels of Thinking: The student will demonstrate critical thinking skills by analyzing, synthesizing, and evaluating problems and information.

Objective 5: The student demonstrates an organizational approach to investigating a problem that includes asking questions, making observations, and recording and interpreting evidence.

Goal 2: Creative Thinking and Expressions: The student will demonstrate effective creative thinking and expression in both oral and written communications.

Objective 3: Generate, classify, and evaluate ideas, objects and/or events in unique and or new ways in order to construct original projects that illustrate solutions to real-life problems or concerns.

Objective 8: Edit and refine information, concepts, and ideas to be reported individually and in groups using appropriate form, emphasis, usage, spelling, and punctuation to ensure a quality product.

II. Project Implementation

A. Project Activities

Activity 1: Florida through the Ages

Overview: Students investigated Florida's geological history through classroom lessons, independent research, and a field trip experience at Florida's Museum of Natural History. The activity began with a virtual on-line tour of the Florida Museum of Natural History. Students visited the museum and completed two hands-on activities with museum staff focusing on collection and identification of fossils. Finally, the students toured the fossil exhibit and conducted independent research for their project.

Activity 2: Beyond Bah, Humbug!

Overview:

The design of this activity is print-stage connections and correlations. Language arts skills were emphasized during this unit as students developed advanced reading, writing, and speaking skills. The centerpiece of the activity was viewing a performance of “A Christmas Carol” at the Hippodrome State Theater. The students interviewed the actors after the performance. Students analyzed the play’s historical importance, cultural significance, and the first and second elements of theater.

Activity 3: Earth, Space, and Beyond

Overview:

This activity was designed to allow students to develop connections between earth and space science and related academic subjects. Science and math concepts will be related by students designing missions to explore the solar system through computer simulations and research. Historical perspectives and understanding was developed through researching manned space flight in language arts class. The students then participated in a hands-on exploration of Newton’s laws as they relate to space travel at the Kennedy Space Center Education outreach center. The students visited Spaceport USA to view actual space hardware and experience a simulated space shuttle launch.

Activity 4: Art, Inspiration, and Science

Overview:

This activity was developed as a “Great Speeches” unit in Language Arts class. Students analyzed great inspirational speeches in American History. The activity was extended to include collaboration with Mr. Eric Zamora, a professional photographer whose photo-essay “Florida’s Nature Coast: Life on the Edge” was being displayed at the Florida Museum of Natural History. Mr. Zamora visited with the class and students were able to learn the story behind the pictures. The students compared the inspirational, educational, and motivational impact of the spoken word, multi-media presentations, and static museum displays.

B. Curriculum Content Focus

This cross-curricular project was designed to introduce students to the idea that science methodology, communication skills, and the use of technology are essential to scientific discovery.

Science Focus

The students researched a specific period of Florida's natural history focusing on these essential questions:

- Geosphere: What were the important features of the geosphere? What was the shape of the Florida Coastline?
- Hydrosphere: What were the features of the ocean near Florida's coast? What surface water features were present?
- Atmosphere: What was the climate like? What were the common weather patterns?
- Biosphere: What types of plants and animals lived in Florida at this time?

Conclusion: How did the interactions of the "spheres" affect the living organisms in Florida?

The student read and analyzed the play’s historical, cultural, and ethical significance. Elements of style as related to theater were discussed and interpreted, including literary elements such as characterization, setting, dialogue, and conflict. After viewing the live performance, students wrote analytical essays on the use of these elements in the scene of their choice. At the

conclusion of the performance, students had the opportunity to interview the cast members to gather further information for their essays.

The students observed how light and sound is used to enhance and manipulate the visual aspect of theater.

- Newton's Laws of Motion as related to space travel, planetary motion, and gravitational forces.
- Investigate planets and other objects in our solar system: formation, characteristics, comparison to Earth.
- Complete a computer simulated planetary exploration mission using NASA interactive website.

Understand the impact space exploration has on the world, United States, and Florida

This activity focused on effective communication of scientific information to increase the public's awareness of environmental issues. The students analyzed and compared different methods of presenting scientific information.

Language Arts Focus

The students took the information learned in science class and conducted research to discover more information about the assigned time period. Students used the reference books in the school media center, internet access in the computer labs, and materials during independent research. Students took notes using MLA-formatted note-cards, organized information into an outline, drafted a research paper, and revised the paper for grammar and organization.

Through reading and writing, students expressed the cultural and historical significance of America's manned spaceflight program, emphasizing the Apollo program using the book *Mission Control, This is Apollo*. Students worked in collaborative pairs to prepare a class presentation about one of the Apollo missions.

Some activities focused on effective oral communication. Students first learned to recognize and analyze the elements of rhetorical speaking by reading and hearing/viewing four great speeches of American history. Students then combined this knowledge to write their own speeches. Students were allowed to choose any topic on which they wished to speak; they were encouraged to select a topic about which they felt passionate. Students incorporated background knowledge and research about their topic in whatever way was appropriate. Public speaking skills were practiced in class before final presentations were made. Eight students were selected to present their speeches at the end-of-year academic awards presentation.

Technology Focus

In Technology class, students took the draft written in Language Arts and turned it into a presentation that was of professional quality. Students used Microsoft Word to make sure that the formatting, heading and margins, double-spacing, subheadings for sections, spelling, and grammar of the final paper were all correct. Students took the information in the final paper and turned it into a PowerPoint presentation. The same standards for conventions applied to the PowerPoint project. The students made sure the presentations had smooth transitions, attractive color and font choices, and a good selection of copyright-safe images and multimedia. Finally, students practiced the best ways to stand up in front of class and gave a convincing presentation of their work.

In technology class, students utilized either Notebook software or Microsoft PowerPoint software to create their class presentations for Language Arts class. Elements of effective digital media were emphasized. The students ensured that the presentation had smooth transitions, attractive color and font choices, and a good selection of copyright-safe images and multimedia. Finally, students practiced the best ways to stand up in front of class and give a convincing presentation of their work.

Before their speeches, students used PhotoBooth software in Technology class to video and then self-critique their speeches before presenting them. Students then created a PowerPoint presentation to accompany their speeches for Language Arts class. The presentation consisted of photos that emphasize important elements of the students' speeches and will run in the background while the speech is being given. Copyright safe images were used, and minimalist transitions, presentation timing, and appropriate image selection emphasized. Students were also encouraged to photograph their own images.

Math Focus

Students were to understand and use the mathematical model of Newton's Second Law ($F=ma$) and understand and use exponents and scientific notation to express large numbers.

C. Next Generation Sunshine State Standards

Science

- SC.8.E.5 The origin and eventual fate of the Universe still remains one of the greatest questions in science. Gravity and energy influence the formation of galaxies, including our own Milky Way Galaxy, stars, the planetary systems, and Earth. Humankind's need to explore continues to lead to the development of knowledge and understanding of the nature of the Universe.
- SC.6.P.13 A. It takes energy to change the motion of objects.
B. Energy change is understood in terms of forces – pushes or pulls.
C. Some forces act through physical contact, while others act at a distance.
- SC.6.E.6.1 describe and give examples of ways in which Earth's surface is built up and torn down by physical and chemical weathering, erosion, and deposition
- SC.6.E.7.4 differentiate and show interactions among the geosphere, hydrosphere, cryosphere, atmosphere, and biosphere
- SC.7.E.6.3 identify current methods for measuring the age of Earth and its parts, including the law of superposition and radioactive dating
- SC.7.E.6.4 explain and give examples of how physical evidence supports scientific theories that Earth has evolved over geological time due to natural processes
- SC.7.N.1.5 describe the methods used in the pursuit of scientific explanation as seen in different fields of science such as biology, geology, and physics
- SC.9-12.N.4.1 explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making

Language Arts

- LA.6.2.1 identifies, analyzes, and applies knowledge of the elements of a variety of fiction and literary texts to develop a thoughtful response to a literary selection
- LA.6.2.2 identifies, analyzes, and applies knowledge of the elements of a variety of nonfiction, informational, and expository texts to demonstrate an understanding of the information presented
- LA.6.3.5.1 prepare writing using technology in a format appropriate to audience and purpose
- LA.6.4.3 develops and demonstrates persuasive writing that is used for the purpose of

LA.6.6.3	influencing the reader develops and demonstrates an understanding of media literacy as a life skill that is integral to informed decision making
Revising LA.6.3	revise and refine the draft for clarity and effectiveness
Informative LA.6.4	develops and demonstrates technical writing that provides information related to real-world tasks
Information and Media Literacy: Research LA.6.6.2	uses a systematic process the collection, processing, and presentation of information
LA.6.6.3	develops and demonstrates an understanding of media literacy as a life skill that is integral to informed decision making
Publishing LA.6.3.5.1	prepare writing using technology in a format appropriate to audience and purpose(e.g., manuscript, multimedia)
Media Literacy LA.6.6.3.1	analyze ways that production elements (e.g., graphics, color, motion, sound, digital technology) affect communication across the media
Math MA.8.A.6.1	use exponents and scientific notation to write large and small numbers and vice versa and to solve problems

D. Instructional Methodology Used

Students were immersed in the elements of theater and how the written word is transformed to a live performance. The students discussed the play with the actors after the performance. The students analyzed scenes and wrote reflective essays on how they interpreted the elements of theater.

The tasks developed for this unit required the student to apply classroom experience, independent research, field trip experience, and computer simulations to solve a real-world problem. The students had to apply their research to develop mission goals, select appropriate measurement instruments, calculate distance and time of travel, and overcome obstacles presented by the environment of the target planet.

This activity began with an analysis of great speeches and use of the spoken word to inspire and motivate. Teacher interaction with students exposed them to using multimedia presentations to inspire and motivate. The students then compared the effectiveness of the different presentation types. The students then chose an issue to write about and give a speech.

Differentiated Instruction for Gifted Learners:

Goal 1 Objective 5: The gifted learners were required to use higher level thinking skills to infer the relationship between the geology and climate of Florida during the assigned period and adaptations of the plant and animal life based on the evidence discovered during their research activities. Development of an understanding of cause and effect was implement beginning with teacher led problem solving followed by student collaborative puzzle solving using the interactive Smart Board in class.

Goal 5 Objective 3: The gifted learners were required to generate, classify and evaluate ideas to a real life situation that impacts their lives. The students were exposed to variety great speeches in history. The gifted students were given an open forum allowing them to express their individuality and original ideas and opinions in a positive, encouraging environment.

Goal 5, Objective 3: The gifted learners were required to use higher level thinking skills to infer the relationship between the geology and climate of Florida during the assigned period and adaptations of the plant and animal life based on the evidence discovered during their research activities.

Goal 5 Objective 8: The gifted learners used the on-line CAAT Collaborative Classroom (CCC) to comment on, critique, and edit the final reports for the assignment. Students uploaded their drafts and were able to view each others work. The CCC was designed for gifted students to encourage open communication and collaboration. The language arts teacher moderated the students on the forum and modeled appropriate comments and critiques. As the project progressed the students were able to collaborate effectively on their own.

Goal 5 Objective 8: As a culminating activity, peer-selected students presented their speeches during the program open house to an audience of parents, teachers, and fellow students.

- Inquiry: The hands-on activities conducted with docents at the Museum of Natural History engaged the students by allowing them to interpret fossil evidence on their own.
- Inference: The essential questions of the research project required students to go beyond factual information and infer how the physical geological features of the time period and the evolutionary process of living organisms were related.
- Research skills: The research project required students to identify appropriate sources, identify alternative explanations, and present the findings in a formal research paper.
- Technology: The technology portion of the project was designed to require students to identify and use appropriate on line sources and develop an effective visual presentation to communicate the results of their research.

E. Nature of the Collaboration

During the museum visit, the students interacted with museum docents involving two hands-on activities: Fossil assembly and interpretation: The students attempted to assemble a fossilized skeleton (manatee). The students then attempted to interpret from the structure what the organism was.

Fossil comparison and classification: Students were given a variety of fossils (both plant and animal) and were tasked with classifying and organizing the fossils.

After viewing the performance, students participated in a forty-five minute question and answer period with the actors to discuss and reflect on their interpretation of the play.

The students participated in a hands-on based lesson with a NASA educational specialist at the Kennedy Space Center's Education Outreach Center. The students observed and participated in demonstrations of Newton's Laws of Motion.

Professional photographer and frequent museum contributor Eric Zamora met with the students prior to the field trip and presented both his photo-essay and video. He and the students discussed

the technology used to complete the projects, his field experiences, and what motivates him to pursue this career.

Participants

Participants	Number
Gifted students	24
Teachers of gifted	1
General education students	20
General education teachers	2
Administrators	1
Community members	1
Total number of participants	49

Student Population

The student population consisted of 24 gifted students and 20 advanced students accepted into the Center for Advanced Academics and Technology Magnet program at Oak View Middle School. All students participating in the program were in sixth grade.

Personnel

The educational staff for the grant was composed of two general education teachers and one teacher of the gifted. All three teachers collaborated on the curriculum and lessons developed for the program. The teacher of the gifted taught the science and math classes, while the general education teachers taught Language Arts, World Cultures, and Technology. The teaching team was supported by the school principal throughout the development and implementation of the project.

III. Evaluation

A. Assessment of Student Performance

Science

The assessment tool used to assess student performance in science was the district's On-Track assessment based on the Next Generation Sunshine State Standards. The assessment was administered in September 2009 and April 2010. The table below compares the general school population to the gifted students participating in the RGTT curriculum. The assessment covered all standards for the sixth grade science curriculum. A summary of the standards addressed in this grant are shown below.

Percentage of Students Mastering Standard

Standard	September Baseline Assessment		April Post Assessment	
	General education students	Gifted student participants	General education students	Gifted student participants
SC6.E.6.1	51%	64%	77%	96%
SC7.E.6.4	35%	50%	54%	66%
SC8.E.5.1	47%	64%	62%	88%
SC8.E.5.3	70%	92%	76%	96%
SC8.E.5.7	39%	67%	56%	79%
SC8.E.5.9	52%	68%	68%	64%

The students participating in RGTT were also given a pre- and post- unit astronomy assessment as part of the “Earth, Space, and Beyond” activity.

Astronomy Pre and Post Activity Assessment

Pre-Test Mean Score %	Post Test Mean Score %
66%	81%
Standard Deviation +/- 12%	Standard Deviation + 7%, - 7.5 %

Language Arts Assessment

Student growth in Language Arts was assessed using Oak View Middle School’s “Panther Writes” assessment. This assessment uses a FCAT Released writing prompt and is scored according to FCAT rubrics by the school’s Language Arts Department. A baseline assessment was given in September, 2009. A final assessment was given in May, 2010. The table below shows the percentage of students scoring level 4 or higher and the mean scores for students participating in the program.

Panther Writes Assessment

	September Baseline Assessment	May Final Assessment
% Students Scoring 4 or higher	4%	79%
Mean Score	2.1	4.2

Technology Assessment

The ST2L Assessment evaluating five areas of technology skills was taken by the participating students at the end of the project. This assessment was not available to administer as a pre-assessment at the beginning of the project. The class scores for the sixth grade gifted students participating in the project was compared to the class average scores for general education eighth grade students who did not participate in the program. The class averages for each area tested and overall mean scores are compared in the table below:

Technology Assessment

Skill Area Assessed	Participating students (6 th grade)	Non-participating students (8 th grade)
1. Technology Operations and Concepts	95%	80%
2. Construction and Demonstrating Knowledge	88%	70%
3. Communication and Collaboration	88%	78%
4. Independent Learning	86%	74%
5. Digital Citizenship	92%	82%
Class Average Score	90%	77%

B. Project Evaluation

Based on statistical and anecdotal evidence, the program was highly successful in meeting goals one and two. The assessment data clearly shows learning gains in science, language arts, and technology. Anecdotal evidence, based on teacher observation, student reflection, and parent input indicate the program was successful in engaging gifted learners. The use of technology beyond the standard office software typically used by students generated a high level of interest and engagement. By infusing technology in all academic areas, the gifted students were able learn a variety of software tools and demonstrate a high level of creativity and technical skill in using a variety of multi-media formats.

Goal three of RTGG was intended to increase student awareness of careers as they relate to academics and school. While anecdotal evidence based on the students' reflections of their experiences with the in-field collaborators throughout the project indicates some success, a formal assessment or survey was not conducted. The teacher's involved in the project feel adding a formal assessment in this area would be appropriate for enhancing the program in the future.

IV. Dissemination

From the start of the project, the teaching team developed and maintained a program website documenting the student activities during the project at:

<https://sites.google.com/a/gm.sbac.edu/ovmscaat6th/>

Student developed web-page portfolios, an integral part of the project, can be found at:

http://www.sbac.edu/~ovmscaat/CAAT_Magnet_Portfolios/Class_Page.html

Additionally, this report will be available for parents and other schools to review and download on the school's web-site: <http://www.sbac.edu/~ovms/>.

V. Budget

Items	Cost
Computer/accessories	\$3177.83
Software	\$914.37
AV materials	\$95.04
Transportation	\$1,854.75
Admission fees	\$1,336.22
Printing	\$90.00
Miscellaneous supplies	\$45.00
Teacher stipends (planning and development)	\$1012.02
Total	\$8,525.23

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Brevard County School District

Project Title: *Canine Commando Challenge*

I. Project Rationale and Goals

A. Project Rationale

The Canine Commando Challenge (C³) project for 250 gifted students in grades five and six at eight (11) district schools provided unique learning experiences for students as they interacted with and trained shelter dogs to correct their behaviors to enable successful adoptions. The Commandos have experienced real world, academic learning while rehabilitating the shelter dogs. Enhanced student learning has occurred through activities such as persuasive letter campaigns, reflective journaling and scrap-booking, research/proposal writing, journalism, web networking with pen pals, and creating Claymation video PSAs. The Canine Commandos thematic focus integrated subject matter content using the K-12 standards. The project activities fulfilled two needs: 1) Provided students with knowledge and intellectual skill development through challenging innovative activities, and 2) instilled a spirit of community service and involvement with their like peers.

B. Project Goals

The C3 project addressed three goals: 1) provide innovative learning experiences to improve academic performance, 2) improve the rate of adoption of shelter dogs, and 3) increase student awareness and involvement in their community and world. The C3 project focused on two key community service components: 1) Create informative and awareness about animal shelter issues, and 2) Rehabilitate shelter dogs to promote their adoption. The Canine Commando project provides a variety of instructional approaches for student learning: curriculum compacting, independent study, field experiences, tiered assignments, enrichment, and primary resources.

II. Project Implementation

A. Project Activities

Activities were varied to allow for multiple learning modalities: working together, higher level thinking, developing products with real world application, leadership and group interaction, student centered discussion and problem solving, researching for in-depth content, and higher level evaluative processes. In the Canine Commandos project, supplementary learning opportunities with instructional activities included:

- Student created scrapbooks to journal their reflections about their experiences. After each visit, students completed a reflection activity such as writing editorials for the *Florida Today* newspaper about their views on adoption versus pet store purchases; researching their favorite breed, discussing why they've chosen this breed, where it originated from, where it is ranked on the intelligence list; completing a cost sheet for pet ownership from the Society for the Prevention of Cruelty to Animals for awareness of the expenditures of owning a pet; comparing and contrasting the differences between the humane society and county run shelters and other assignments. They also added artwork which could have been original drawings, clip-art and photos that they took with cameras of their own as well as cameras awarded to them from DonorsChoose.org.

- Some students chose to produce a 30-second public service announcement (PSA) about adopting shelter animals using Claymation Video. Cameras previously donated were used to shoot individual segments then the pictures were transferred to PowerPoint where they added graphics, sound effects, and voice over. Another group of Commandos researched shelters from around the world and sent emails asking them to provide one tip that makes their shelter a success. The students then compiled their findings and wrote a proposal based on these findings to give to the new county director. An original theme song was written (both melody and lyrics) with vocals to play on the website called “Do it for the Dogs.”
- Canine Commandos redesigned a website, www.CanineCommandos.com, with explanation of the program, how to train dogs (written instructions), training video online for all to use at home, photos and links. It also plays the theme song including written lyrics for others to sing along. The site keeps tracks of visitors, records comments and allows the public to become members.
- Students tracked the dogs that were adopted by placing comment cards on the dogs’ runs once trained. New adoptive owners filled out the card and students collected them to track Canine Commando adoption successes. This is where the shelter employees really had to help, which took much getting used to on their end; they needed to make sure the public answered the questions in order for the students to keep percentages and averages of dogs that were trained and if the training had any effect on the adoption. The prediction was for a 25% adoption rate due to our training. The rate for the year was actually 49%.
- Another group of Commandos researched celebrity animal lovers such as Betty White and companies involved with animals. They sent a copy of the project brochure and a Commando training video in anticipation of acknowledgment of the students’ community involvement. The Commandos received one bite from Iams Pet Food requesting partnership. Iams also partnered with the shelter by shipping fifty (50) cases of starter food kits. They also shipped 200 leashes and are currently working on providing us extra materials for training.
- Several students are writing a monthly school newspaper with interviews, classified ads, shelter experience, dog information, etc.
- “Adopt Me” vests have been designed and sewn to give to the shelter for the dogs to wear at public events.
- One school is maintaining the public hallway bulletin board that is changed monthly with pictures and shelter information as well as student activities such as ways to help with adoption and volunteering at the shelter.
- A skit/puppet theater show was created to educate the public on misconceptions about certain breeds of dogs such as Dobermans, Rottweilers, Pit Bulls, and German Shepherds.
- Students also created a large dog sculpture with photos that were taken each month during visits to the shelter which was then made into a collage to represent the students’ love and compassion for the dogs.

B. Curriculum Content Focus

Varied sources, forms, and themes were incorporated to develop the curriculum for this project. The curriculum included field trips, student research, teacher instruction, and instruction and materials provided by local business partners. The main focus of the curriculum was to encourage students to experience the connection between academic and real-world disciplines, while getting firsthand experience provided by our business partners. Students worked to meet set goals that were part of the curriculum design, culminating in the publication and distribution of three issues of the school news. (See Tables I and II).

Table I
Crosswalk of Activities to Curriculum Content and Standards

	Academic Disciplines				Multiple Intelligences			
	Social Studies	Language	Arts	Math	Mathematical	Spatial	Linguistic	Musical
Working with animals in humane setting	X	X					X	
Researching, statistics, surveying, graphing	X	X		X	X	X	X	
Writing, recording videos, poster/brochure design, journalism, comment cards		X	X			X	X	
Commercial & media development, speaking & writing proposals, PSA (puppet show/skit, bulletin board creations)	X	X	X				X	X
Create theme song, photography, sculpture with photos		X	X		X	X	X	X
Web design/ development, Power Point Slide Shows	X	X	X	X	X	X	X	X
Scrapbooks	X	X	X			X	X	
Leadership, group work	X	X					X	
Sewing “adopt me” vests		X	X	X	X	X	X	

Table II
Crosswalk of Activities to Florida Frameworks for K-12 Gifted

<i>Florida Frameworks for Gifted Goals</i>						
	Identify/ Apply	Research Tools	Question	Identify/ Investigate	Divergent Views	Develop Product
Working with animals in humane setting	X		X	X	X	X
Researching, statistics, surveying, graphing	X	X	X	X	X	X
Writing, recording videos, poster design, brochure, journalism, comment cards		X	X			X
Commercial & media development, speaking & writing proposals, PSA (puppet show/skit, bulletin board creations)	X	X	X	X	X	X
Create theme song, photography, sculpture with photos				X		X
Web design & development, Power Point Slide Shows		X		X		X
Scrapbooks	X					X
Leadership, group work		X	X	X	X	
Sewing “adopt me” vests					X	X

C. Next Generation Sunshine State Standards Addressed

Language Arts

- LA.A.1.3.3 demonstrates consistent and effective use of interpersonal and academic vocabularies in reading, writing, listening, and speaking
- LA.A.1.3.4 uses strategies to clarify meaning, such as rereading, note taking, summarizing, outlining, and writing a grade level-appropriate report
- LA.A.2.3.1 determines the main idea or essential message in a text and identifies relevant details and facts and patterns of organization
- LA.A.2.3.3 recognizes logical, ethical, and emotional appeals in texts
- LA.A.2.3.6 uses a variety of reference materials, including indexes, magazines, newspapers, and journals; and tools, including card catalogs and computer catalogs, to gather information for research topics
- LA.D.1.3.3 demonstrates an awareness of the difference between the use of English in formal and informal settings
- LA.D.2.3.4 understands how the multiple media tools of graphics, pictures, color, motion, and music can enhance communication in television, film, radio, and advertising

Writing

- LA.B.1.3.1 organizes information before writing according to the type and purpose of writing
- LA.B.2.3.1 writes text, notes, outlines, comments, and observations that demonstrate comprehension of content and experiences from a variety of media

- LA.B.2.3.2 organizes information using alphabetical, chronological, and numerical systems
- LA.B.2.3.3 selects and uses appropriate formats for writing, including narrative, persuasive, and expository formats, according to the intended audience, purpose, and occasion
- LA.B.2.3.4 uses electronic technology, including databases and software, to gather information and communicate new knowledge

Listening, Viewing, and Speaking

- LA.C.1.3.1 listens and uses information gained for a variety of purposes, such as gaining information from interviews, following directions, and pursuing a personal interest
- LA.C.1.3.4 uses responsive listening skills, including paraphrasing, summarizing, and asking questions for elaboration and clarification
- LA.C.2.3.2 uses movement, placement, juxtaposition, gestures, silent periods, facial expressions, and other nonverbal cues to convey meaning to an audience
- LA.C.3.3.1 understands how volume, stress, pacing, and pronunciation can positively or negatively affect an oral presentation
- LA.C.3.3.2 asks questions and makes comments and observations that reflect understanding and application of content, processes, and experiences
- LA.C.3.3.3 speaks for various occasions, audiences, and purposes, including conversations, discussions, projects, and informational, persuasive, or technical presentations

Mathematics

- MA.B.3.3.1 solves real-world and mathematical problems involving estimates of measurements including length, time, weight/mass, temperature, money, perimeter, area, and volume, in either customary or metric units

Social Studies

- SS.C.2.3.5 understands ways he or she can contact his or her representatives and why it is important to do so and knows which level of government he or she should contact to express his or her opinions or to get help on a specific problem
- SS.C.2.3.6 understands the importance of participation in community service, civic improvement, and political activities

D. Instructional Methodology Used

- Differentiated Instruction
- Hands-on authentic learning
- Problem-based learning
- Inquiry approaches
- Independent research
- Cooperative learning groups
- Ongoing authentic assessment
- Creativity
- Higher Order Thinking

E. Nature of the Collaboration

Collaboration was extremely important for the success of this project. All eight teachers met periodically (and emailed) to ensure the safety and integrity of the program. Consistent contact was held between the teachers and the obedience trainer. Each teacher chose different products

for the students to produce which included a variety of styles from which the students themselves chose using Multiple Intelligences. Students also communicated progress and problems with one another via Gagle.net and the Comment Cards. The directors from both shelters, South Animal Care Center and Central Brevard Humane Society supplied time and materials as required, which included but was not limited to, shelter workers making sure appropriate dogs were selected and managing comment cards once a dog was adopted. Radisson Hotel Melbourne donated three ballrooms (\$2000 value) for the Expo.

Participants

Participants	Number
Administrators	16
Gifted students (grades 5-6)	219
Teachers of gifted students	8
Community members	19
Parent Volunteers	60
Dog Trainer	1
Music Teacher	1
Total number of participants	324

Personnel

A total of eleven elementary schools (three schools are bused to another school to receive services) with eight teachers were involved in C³. Each teacher provided instruction and guidance for all the projects including pre/post tests and assistance with the dog trainer at the shelters.

III. Evaluation

A. Assessment of Student Performance

This project used various authentic and traditional assessments, providing both quantitative and qualitative data. Students who are gifted were evaluated on their academic performance using teacher-designed pretests and post-tests. This test provided measurable data to quantitatively assess student KWL.

School/Teacher	Pre Test Score %	Post Test Score %
Roy Allen/Gloria McConville	67.5	83
Lewis Carroll/Connie Miller	67	96
Challenger 7/Amanda Howell	70	89
Indialantic/Robin Robb	68	94
Meadowlane Intermediate/April Dennis	68	78
Ocean Breeze/Joy Delmar	71	86
Tropical/Virginia Hamilton	68	90
University Park/Jayne Waters	13.2	90

Students used self evaluations to measure group participation and cooperation to provide teachers a tool to recognize leadership and cooperative skills.

Students selected projects to demonstrate learning goals at the onset of the project and created a variety of performance-based products. These products allowed both students and teachers to monitor progress toward their goals. Skills included: Statistics, Photography, Public Relations, Researching/Reporting, Technology, Teamwork, Newspaper layout, Leadership, Sculpture/Art, Writing, Web Designing and Interviews.

B. Project Evaluation

The success of the Canine Commandos project was indicated by the increased adoptions of shelter dogs which we predicted to be 25%. Of all the dogs we worked with, through public feedback on comment cards, 50% of the dogs were adopted due to the obedience training. Because of one groups' project where they put packets together to ship to celebrities and companies dealing with dogs, Iams contacted us and is now our business partner. They shipped fifty cases of dog and cat starter food kits to South Animal Care Center as well as donated \$10,000 to continue the project for next year. They also shipped 200 leashes for our use with the training for next year.

The students' reflections were very positive and the sixth graders are graduating to middle school next year and are sad to see the program end for them. Not only are seven of the eight schools returning next year (one not returning due to retirement), seven more schools have indicated a desire to participate with the Commandos. The number of students will be between 300 and 400 training the dogs. Since the numbers are so much larger and more funding needed for buses and trainer, we will split the schools between two shelters; north of 520 Causeway will train in Cocoa and south of 520 in Melbourne. We have the support of both shelters and the one in Melbourne in researching costs for putting a portable trailer on-site so that all the students may spend their whole day at the shelter training and working on their projects. Should this occur, we will offer our services in other areas of the shelter such as grooming and cat training.

The pride of the students was very obvious at the Expo where they displayed their projects. The Expo was set up very much like a Science Fair. Parents provided the lunch, potluck buffet style and students sat with students from other schools, ate and were recognized with awards. The district superintendent as well as shelter directors and school board members attended.

IV. Dissemination

Information about the project and results were presented to the following:

1. School Board Superintendent, School Board Staff Development Leader, District Gifted Program Resource Leader (also went to the shelter with students), School Board Grant Developer, School Board Brevard Foundations Grant Coordinator, several principals, two Shelter Directors via the Canine Commando Expo May 6, 2010 at the Radisson Hotel in Melbourne; PTO members, Florida Corgi Aid, All Things Pawsitive (obedience trainer), Digital Visions, *Highlights* Magazine Corporation, Deanna Krise (Volunteer Coordinator CBHS), University of Central Florida administrators, Joe Follman of Serve and Learn DOE.
2. Florida Today Newspaper, ABC Studios in New York (Good Morning America), Mark of Excellence Paper, PetGazette Newspaper, Teacher of the Year Magazine (featured as one of Brevard's best), Katy Farber-Author (project will be featured in her next book).
3. The www.CanineCommandos.com web page is accessible to the public worldwide. They [public] may become members, provide feedback and comments and view information and pictures about the projects completed. The web page will grow and be updated as the Commandos continue to progress.

V. Budget

Item	Unit	Cost
Trainer		\$3,900
Transportation		\$1,478.72
Materials:		
Clickers	45	\$68.00
Leashes (6 ft.)	20	\$140.00
Collars (15 at 10-15" 15 at 13-18" 15 at 16-24" 3 at 22-34")	48	\$308.00
8 chains and 16 hook snaps to secure leashes to fence		\$128.00
Lockers (with locks) for storage	2	\$265.00
Substitute pay	2	\$149.00
Total		\$6,432.72

Note: Due to shelter shutdown because of distemper and cancellations due to FCAT, several trips were canceled resulting in lower expenditures for trainer and buses.

VI. Contact

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Broward County School District

Project Title: *Silver Trail Middle School Bald Eagle Project*

I. Project Rationale and Goals

A. Project Rationale

The Silver Trail Middle School (STMS) *Bald Eagle Project* was implemented to enhance the academic performance of gifted students through the collaborative efforts of students, a wildlife biologist, local community members and representatives of various national environmental organizations as they participated in a real life biological study of a pair of wild Bald Eagles nesting locally. Gifted students were encouraged to pursue topics of study in greater depth while building their own unique talents and skills as they enriched the seventh grade curriculum to include a real world investigation of the impact of human activity on the ecosystem inhabited by the eagles. At a time when many middle school students are turning away from their studies and toward the consuming quest for peer approval, it is especially important to offer the gifted student a reason to focus on challenging activities. The students had access to, and were encouraged to communicate with, collaborative partners regarding their investigation and findings. This interaction gave the students a sense of relevance. In addition, the eagles served as an example for many of the concepts learned throughout the year, making these seemingly diverse concepts come alive for the students.

B. Project Goals

The intent of the STMS Bald Eagle Project was to accomplish the following:

- Goal 1: Increase retention of gifted students within the gifted team.
- Goal 2: Offer gifted students an opportunity to conduct relevant, real-world investigations.
- Goal 3: Offer gifted students opportunities to explore topics of interest while developing their own unique talents and skills.
- Goal 4: Develop within the gifted student a sense of self, as each explores the possibilities the world has to offer, accomplished through collaboration with community members and professionals.
- Goal 5: Increase the gifted students' scientific understanding about the world around them.
- Goal 6: Increase the use of critical thinking skills among the 7th grade gifted students at Silver Trail Middle School.

II. Project Implementation

A. Project Activities

The backbone of the project stemmed from the study of a pair of wild Bald Eagles that built a nest near the school. Students began the year researching the history, biology and habits of Bald Eagles and used this information to design a study of this local pair of eagles. They used this research to support the following activities:

1. Design a behavioral checklist that could be used by students and community members to collect data relevant to the safety and habits of these urban eagles, as well as the possible impact of traffic and human activities on their nesting success.

2. Stimulate public interest and education by hosting a web-based naming poll for the fledglings raised in the nest during the 2009-2010 breeding season. (207 Votes were cast from 34 different states).
3. Compile student and community-member collection of data using the student-generated behavioral checklist. Students were encouraged to post their eagle-watching experiences, questions, and photos on a community based website, which then solicited public responses in the form of answers to questions, comments, and words of encouragement about the study. Analyze the student and community collected data and compare to data collected in previous years. Recommendations regarding future human activities surrounding the nest site were then created based on the current findings. Graphs of the data were created in order to analyze the behaviors that occurred during various developmental stages of the eaglets.
4. Analyze authentic data collected by collaborating with wildlife scientist Brian Mealey, Ph.D. This data referenced the latitude and longitude location of wild Bald Eagles as they moved about their home ranges within the Florida Bay area. Comparisons were made with regard to territory and overall size of range.
5. Participate in a dynamic presentation referencing the rewards and challenges experienced by scientists. The presentation featured the field research of Dr. Mealey and included discussions pertaining to his research with Bald Eagles, Osprey and Estuarine Reptiles.
6. Participate in a hands-on field experience led by wildlife biologist Dr. Mealey, who instructed students in the use of satellite platform transmitting terminal radio transmitters as used to track the location of wild Bald Eagles once the fledglings have left the nest. Practice and instruction was also presented in the use of handheld GPS devices, with groups of students setting waypoints for other students to use in locating and retrieving artificial “eagles”.
7. Use of hand held probeware devices to investigate microclimates around the school property. Findings were used to support the discovery of human impact on the environment.
8. Participate in a presentation by Lynda White, coordinator for the Audubon Society’s Eagle Watch. Lynda traveled from central Florida to speak to the students about Audubon’s efforts to preserve nesting sites in Florida, as well as the rescue and rehabilitation of injured eagles and other birds of prey. Lynda was accompanied by a rescued, live Bald Eagle, named Paige. Paige offered the students an opportunity to get “up close and personal” with a member of the species they had been studying throughout the year.
9. Select and complete 3 unit projects over the course of the year. Students were given a choice of 9 possible projects for each unit. These research based products and their respective rubrics were created to allow alignment with the *Frameworks for the Gifted* and individual EP goals. Project choices included eagle-themed projects that correlated with the unit of study, a variety of unit topics, as well as “student choice” options that allowed students to create their own unit-related area of research and product. Projects also allowed students opportunities to further develop skills using grant supported technology such as GPS devices, Spark probeware, binoculars and field guides, and a handheld digital microscope.

B. Curriculum Content Focus

The *STMS Bald Eagle Project* encouraged gifted students to investigate real world problems while they used and increased their own individual talents and skills. The students were able to apply their new knowledge to better understand the world around them, and in doing so developed a sense of self while they explored the possibilities that the world has to offer.

- Outcome 1: The gifted student population often struggles with motivational issues. Each year multiple gifted/advanced students protest at what they perceive as being increased academic requirements, by requesting removal from the gifted/advanced team. For example, over the course of the 2008-2009 academic year, 6 students requested, and were granted, removal from the gifted and advanced team. These students were placed on a team that

set minimal expectations of their students. This project attempts to increase the relevance of the curriculum, resulting in a decrease of students requesting removal from the gifted/advanced program.

- Outcome 2: The gifted student should be offered opportunities to tackle a wide range of authentic and complex academic tasks that require doing real work (*Frameworks for K-12 Gifted Learners*). This project intends to offer these opportunities through development of the advanced use of the scientific process while conducting real-world scientific research. Students will conduct research, design a study, collect data, analyze that data and make recommendations pertaining to a local environmental issue. Results of the study will be shared with a national non-profit organization.
Outcome 3: Gifted students should be allowed and encouraged to pursue topics of study in greater depth or to a greater level of cognitive challenge. This goal will be accomplished through the completion of student-selected unit activities, demonstrating advanced investigation and research skills, while developing individual skills and talents. Efforts will be made to correlate unit activities with individual Educational Plans (EPs).
- Outcome 4: Gifted students are more likely to perform at levels appropriate for their abilities if they develop a sense of self and are encouraged to explore the possibilities the world has to offer. This project attempts to provide this opportunity through collaboration with community members while educating the public and assisting to protect the Bald Eagle nest site from intrusion and/or disruption during the sensitive breeding season.
- Outcome 5: Gifted students need to learn about the world around them through a rigorous and challenging science curriculum that is enhanced through the study of universal concepts, complex levels of generalizations, and essential questions. This project attempts to provide these needs as evidenced by an increase in the percent of gifted students reaching proficiency level or better on the 2011 Science FCAT.
 - Outcome 6: Gifted students at Silver Trail Middle School have traditionally earned their lowest scores on the Reference and Research portion of the FCAT Reading test. By giving the gifted students opportunities to use critical thinking skills in areas of their own interest and talent, this project attempts to increase the percent of gifted students correctly answering questions relating to the Reference and Research strand on the 2010 FCAT for Reading.

C. Next Generation Sunshine State Standards Addressed

Science

The Nature of Science

- SC.H.1.3 Standard 1: uses the scientific processes and habits of mind to solve problems
- SC.H.2.3 Standard 2: understands that most natural events occur in comprehensible, consistent patterns
- SC.H.3.3 Standard 3: understands that science, technology, and society are interwoven and interdependent

Processes of Life

- SC.F.1.3 Standard 1: describes patterns of structure and function in living things
- SC.F.2.3 Standard 2: understands the process and importance of genetic diversity

How Living Things Interact with Their Environment

- SC.G.1.3 Standard 1: understands the competitive, interdependent, cyclic nature of living things in the environment
- SC.G.2.3 Standard 2: understands the consequences of using limited natural resources

Frameworks for the Gifted

- Goal 1: will be able to critically examine the complexity of knowledge: the location, definition, and organization of a variety of fields of knowledge
- Goal 2: will be able to create, adapt, and assess multifaceted questions in a variety of fields/disciplines
- Goal 3: will be able to conduct thoughtful research/exploration in multiple fields
- Goal 4: will be able to think creatively and critically to identify and solve real-world problems
- Goal 5: will be able to assume leadership and participatory roles in both gifted and heterogeneous group learning situations.
- Goal 7: will be able to develop and deliver a variety of authentic products/performances that demonstrate understanding in multiple fields/disciplines.

D. Instructional Methodology Used

In order to complete the first phase of the STMS Bald Eagle Project - researching the history, biology, and habits of Bald Eagles, students received direct instruction on the skills necessary to complete, summarize and document their research. They were guided in the location and evaluation of relevant, accurate and reliable sources as well as how to record accurate, detailed and concise notes derived from their research. These skills were continually developed and reinforced throughout the year.

Once students had accumulated sufficient background information about the eagles, guided inquiry was utilized as a method to develop the Bald Eagle study. As they assembled the framework for their behavioral checklist, students were encouraged to consider the requirements, affects, and restrictions of the items included in their checklist plans. Students consulted with professionals and community members to assist with this process. This comprehensive study afforded an opportunity to introduce all of the Grade 7 Benchmarks for the Nature of Science Strand of the Next Generation Sunshine State Standards. Student gains were documented through the pre- and post tests.

The behavioral checklist was completed in time to begin collecting data for the 2009-2010 Bald Eagle breeding season. From November 2009 through April 2010, the checklist was used by students and community volunteers to collect data. During this time span the adult eagles laid three eggs, raised the hatched eaglets, and cared for them until the offspring left the nest in April. When the checklist was completed, the focus of instruction turned to the state curriculum. At this time the eagles were continually used as examples to reinforce the seventh grade Next Generation Sunshine State Standards. Students frequently expressed surprise at how all of the different scientific concepts could be related back to the eagles.

Following creation of the behavioral checklist, the remaining curriculum was frequently compacted throughout the year. This afforded the time necessary to introduce and explain the three research-based unit projects that were incorporated into the learning requirements, as well as offering opportunities for differentiation. The unit projects were designed to allow students an opportunity to pursue topics of their own interest with a greater level of cognitive challenge. Because the gifted students frequently advanced through the traditional curriculum at a faster pace than the regular education students, the unit projects made it possible for the instructor to provide another level of differentiation. Following the compaction of the curriculum, those students who had acquired the necessary knowledge and skills were allowed an opportunity to work on their unit projects in the classroom. Meanwhile, students who needed further reinforcement were given the necessary instruction. This allowed an opportunity for the gifted learners to delve more deeply into their

selected unit topics. Sufficient time was allotted for all students to complete the requirements of the unit projects from home, if needed.

For each unit, the projects were outlined on a menu containing nine options. Each menu contained research-based projects representing a variety of learning styles as well as social grouping opportunities. Gifted students were counseled on their own individual educational plans (EPs) prior to their selection of a project. This information helped them select topics and social groupings that supported their EP goal attainment.

Funds from the grant were used to purchase technology that was also woven into many of the unit project selections, and served as a motivator for several previously unmotivated students.

E. Nature of the Collaboration

This project allowed multiple opportunities for collaboration. We were supported throughout the year by a wildlife biologist, leaders of non-profit organizations, city officials - including the mayor of Pembroke Pines, and a large community of interested bird enthusiasts. The enthusiasm and support for our project was greater than expected. Through the use of the web site, many community members learned about, and were able to assist with the project. One previously unknown gentleman volunteered many hours of time to help with final formatting of the behavioral checklist, which was then uploaded to the website for public use. Consequently, several bird enthusiasts used the checklists to collect hours of data, which were sent to the class electronically and saved in a file for our analysis. The primary contributors to our project included:

Brian Mealey, Ph.D., Wildlife Biologist, Dr. Mealey collaborated with students throughout the project. He provided an ongoing resource for the current research being conducted on Bald Eagles in Florida and across the nation. He also conducted in-house field trips that clarified the mental, physical, educational and emotional requirements of conducting research on wildlife in the field. Dr. Mealey led the students in a hands-on activity regarding the use of satellite radio transmitting devices used in tracking of wild Bald Eagles as well as other birds of prey and reptilians of the Florida Bay area. While giving the students an opportunity to operate the tracking devices, he also assisted them in using hand-held GPS devices in order to mark way-points and locate a “hidden eagle”. In addition, Dr. Mealey provided essential recommendations regarding the creation of the observational checklist and which observations would be most useful to the scientific community.

Lynda White, Audubon’s Eagle Watch coordinator. Ms. White supported the project through frequent communications regarding her organization’s efforts to rescue and rehabilitate Bald Eagles and other birds of prey during the 2009-2010 breeding season. These periodic updates and wonderful photos were received throughout the year and offered many opportunities to keep the project alive for the students during the lengthy data collection period. Ms. White also served as an evaluator of the student-created checklist. She provided instrumental recommendations regarding the selection of items to be included on the final copy. Toward the end of the academic year, Ms. White provided a spectacular culminating activity by traveling from across the state with her live, eagle ambassador, Paige, to present a special program for the students of Silver Trail. While learning more about the Audubon’s efforts to protect and rescue many birds of prey species, students were given the opportunity to experience a live Bald Eagle at close proximity.

Ken Schneider, webmaster and avian specialist. Mr. Schneider is a retired physician and an avid naturalist. While he supported the project in many invaluable ways, the greatest contribution was the hosting of a website that served as a link between the public and the students conducting the

research. Through the website, students were able to post their observations, pictures and questions, allowing the public to follow what was happening with the project and to participate as well. The website was used to encourage the data collection by the public, and allowed that data to be sent to the school for analysis. Mr. Schneider also coordinated the nation-wide poll that used student-provided name choices to select the names for the three eaglets that were raised in the nest this year. This ongoing website may be accessed at:
<http://www.rosyfinch.com/BaldEagleNest.html>

Doug Young, president of South Florida Audubon Society. Mr. Young also serves as the director of the Pembroke Pines Bald Eagle Steering Committee and has been instrumental in support of the Bald Eagle project by providing, through the Audubon Society, the financial resources necessary to cover travel costs for Ms. White and Paige. Concurrently, the educational opportunities presented by the urban location of the Pembroke Pines Bald Eagle nest have been a major focus of the steering committee. Their efforts to position a web camera within view of the nest promises to provide multiple years of future study opportunities, should they succeed.

Teachers of the gifted and math teachers. The teachers of Silver Trail Middle School gifted and advanced team supported the project periodically throughout the year. The Language Arts teacher, Michelle Bennet, was instrumental in instructing the students on the methods of conducting and documenting research for their background knowledge of the eagles. These skills were also used for the research associated with their individual unit projects. The reading teacher, Samia Canady, was able to incorporate written selections into her reading curriculum dealing with Florida’s natural environment. The math teachers assisted with mapping latitude and longitudinal coordinates. They also provided the flexibility necessary to rearrange student schedules so they could attend the various in-house field trips.

Participants

Participants	Number	Participants	Number
Gifted Students	40	Teachers of Gifted	4
General Education Students	97	General Education Teachers	4
Administrators	2	Parents	2
Community Members	Approximately 15	Other Participants	4
Total Participants	168		

Personnel (Staff involved in the project):

- Administrators:
 - Steven Frazier, Principal
 - Christine Walker, Assistant Principal
- Teachers of the gifted:
 - Kelly Smith
 - Angela Rigdon
 - Michelle Bennett
 - Lucy Norvall
- General education teachers:
 - Samia Canady

Jodi Gorfinkel
Bobbye Boyle
Rebecca Baltzelle

Student Population:

All of the Silver Trail Middle School seventh grade students who have been determined eligible for gifted services participated in this project. The 97 other seventh graders were designated high achievers based on 2009 FCAT reading and math scores.

III. Evaluation

A. Assessment of Student Performance

Students were assessed through the use of a pre/post test designed to measure the mastery of the Nature of Science Strand “H” of the Next Generation Sunshine State Standards. The results indicate clear academic gains among the gifted population involved in the project. Pretest results of the gifted population indicated 60.41% accuracy in items relating to the Nature of Science. The test instrument included multiple choice and true/false questions, as well as several short and extended response questions.

Following completion of the design portion of the Eagle study, the gifted students demonstrated 82.55% accuracy, which indicates a significant learning gain of 36.64%. It should be noted that post test results were attained prior to the data analysis portion of the eagle study. Further gains in this area would be expected, although are not currently documented.

Additional academic gains were demonstrated in relation to the Sunshine State Standard Strand “G”, dealing with how living things interact with their environment. A pretest composed of items relating to this strand was given prior to instruction in the curriculum. This pretest was similar to the previous Nature of Science pretest in that it contained multiple choice, true/false, and short and extended responses. Gifted students taking this pretest averaged 63.61% accuracy. Instruction in this unit was supplemented by frequent reference to and exploration of the impact that these concepts would have on our Pembroke Pines eagles. Post test results showed 76.425% accuracy, indicating a learning gain of 20%. Due to the many variables involved, it is not possible to determine a cause and effect relationship between the project and learning gains exhibited, however, the results do follow the expectation that gifted students benefit from the inclusion of authentic and complex academic tasks that require doing real work.

- Goal: Increase the use of critical thinking skills amongst the 7th grade gifted students at Silver Trail Middle School

Further analysis of measurable academic gains is delayed due to the unavailability of this year’s FCAT results at the time this report was submitted. When the results are available, comparisons between the 2009 and the 2010 Reading FCAT results will be made for the gifted students participating in the project. It is expected that the participation in the project will assist the gifted students in acquiring learning gains with respect to the Reference and Research strand of this test. This has been an area of traditional weakness amongst the 7th grade gifted students at Silver Trail Middle.

Additional analysis of measurable gains will also be completed when the students that participated in this year's program take the 8th grade Science FCAT next year. It will be determined following the results of that assessment whether learning gains were made in respect to overall scientific knowledge. Increase in general scientific learning gains as compared to previous year's gifted students who did not have the benefit of studying the eagles may indicate a positive impact due to participation in this project. While there are too many variables involved to be able to demonstrate a cause and affect relationship, gains may support the project's increased relevancy and resulting retention of the 7th grade curriculum. Students will better retain information that is made relevant.

B. Project Evaluation

Goal: Increase retention of gifted students within the gifted team

The STMS Bald Eagle Project had multiple positive impacts on the participating gifted students. By providing the opportunity to apply real world learning to the state mandated curriculum (increasing the relevance of the curriculum), the project helped the concepts come alive for the students. This may have impacted the observed increase in retention of students on the gifted team. In prior years, several students each year have requested to be removed from the team. This year, although one student withdrew from the school and consequently the team, not a single student requested to be placed on a different team.

Goal: Offer gifted students an opportunity to conduct relevant, real-world investigations.

Another positive impact of the STMS Bald Eagle Project was the development of advanced use of the scientific process while conducting real-world scientific research. 100% of the gifted students participated in conducting background research, designing the study of the eagles, and analyzing the data that was collected. The data was then shared with Audubon's Eagle Watch, a non-profit environmental organization.

Goal: Offer gifted students opportunities to explore topics of interest while developing their own unique talents and skills

One of the greatest impacts of the STMS Bald Eagle project was the opportunity for gifted students to pursue topics of interest at a greater level of cognitive challenge. Through the use of unit projects, students could supplement their learning by choosing, then researching topics that they were interested in, and finally creating products that utilized their individual talents and skills. In order to connect the various curriculum units to the STMS Bald Eagle Project focus, each unit project menu contained several Bald Eagle-themed choices. The projects were eagerly received and completed with an amazing degree of quality, talent, and attention to detail. 100% of the gifted students completed 3 unit projects, and many far exceeded the expectations outlined by the provided rubrics. For example, gifted students earned an average score of 84.71% on the Earth's Water Unit Projects. This figure includes the scores of 9 gifted students receiving scores above 100% due to efforts that exceeded the rubric guidelines. Of all unit projects completed, only 17% of the gifted students earned scores below 80%.

Goal: Develop within the gifted student a sense of self, as they explore the possibilities the world has to offer, accomplished through collaboration with community members and professionals

The collaboration with the scientist and community members allowed participants in the study to realize that "science" can be done by everyone. Students learned that not only can they participate in an authentic scientific investigation, they could provide valuable information that

helps educate the public and lead to the preservation of the eagles' nest site. Thanks in small part to public awareness and education, the Pembroke Pines Bald Eagles successfully raised three young eagles to the fledging stage. Without this public awareness, the nest could have been damaged or lost to any number of urban hazards. Several times through the year, the project participants were able to recognize potential sources of danger to the nest, and through contact with the proper authorities, these hazards were removed. For example, when it was noted that utility locator flags had been posted along the swale in front of the nest, authorities were notified, and the impending construction project was delayed until such time as the nest was no longer in use. Project observers also noted photographers entering and exiting the woods surrounding the nest tree. Again, authorities were notified and fencing and signage was immediately installed, preventing further possible disturbance to the nesting eagles.

Public awareness was also increased due to the student's hosting an informational presentation by Lynda White of the Audubon Eagle Watch program. This free public presentation helped inform the public of the need to protect the nest site.

IV. Dissemination

Information about the STMS Bald Eagle project was disseminated at multiple levels. At the school level, the science department was given an in depth explanation of the project elements at the beginning of the school year. In addition, frequent updates throughout the year allowed an opportunity to discuss specific details regarding the resources available, as well as the successes and challenges faced as the project was implemented. A bulletin board posted outside of the classroom featured updates of the project's progress, as were various student products that were displayed and rotated during the year. Several school-wide announcements were made as the project progressed and the students and staff at Silver Trail were made aware of the progress of the project and the eagles, including the web-based naming poll. The school's media specialist provided a convenient link to the project's website through the Silver Trail school website, making it easy for all interested parties to follow our progress.

At the district level, information about the project was shared with the Department of Advanced Academics. Unit project guidelines, activities, rubrics and community contacts were made available to all teachers within the district through contact with this department. The project was also outlined on the Broward County Environmental Stewardship website, which can be accessed at <C:\Documents and Settings\P00013275\My Documents\Documents\Eagle Study\publicity\Broward County Public Schools Environmental Stewardship Website.mht>

The community was kept aware of the project through the website hosted by collaborator Ken Schneider. Students posted their questions, comments and observations made while collecting data on this webpage - <http://www.rosyfinch.com/BaldEagleNest.html>. In addition, Mr. Schneider frequently posted requests for assistance from the public in the collection of data. Directions on the use of the student-created behavioral checklist could be found on the website, and a direct link to send the collected data to the students for analysis.

Additional community dissemination occurred through the public presentation given by Lynda White. This free event attracted a gymnasium full of interested community members, including the mayor of Pembroke Pines, Mr. Frank Ortis. Not only did they learn about Audubon's Eagle Watch program, they were updated on activities involved with the school's project with the Pembroke Pines Bald Eagles. As protectors of the Pembroke Pines Bald Eagles, the city Steering Committee was kept updated about the activities of the students and the progress of the study. Environmental education

remains a primary focus for this committee, and a continued close relationship between the committee members and the project administrator is expected.

V. Budget

Items	Cost
Eagle location device: Platform Transmitter Transponder	\$5,000.00
Pasco SPARK learning systems and various probeware sensors	\$2,533.00
Binoculars	\$663.30
Field Guides	\$67.85
Garmin Handheld GPS Navigators	\$409.85
Proscope handheld microscope and lenses	\$991.00
TOTAL	\$9,665

Example of a Behavioral Checklist designed by students

(It should be noted that the final formatting of the checklist was accomplished with the help of a community volunteer after following the student's progress on the community-based website.

30-Minute Eagle Nest Observational Checklist

Bald Eagle Nest ID B0002 Broward 2009-20010
Observer: Kelly Smith
Date: Jan 17, 2010
Observation Start Time: 12:00
Observation End Time: 12:30
Total Time: 30min
People at Arrival: 1

Weather Conditions:
 Sunny
 Cloudy
 Rain
 Thunderstorm
 Other:
 Temperature °F: 78

Adult Eagle Behavior:
 Normal
 Nest Construction
 Incubation
 Brooding
 Flying
 Sitting of Nest
 Roosting
 Nervous
 Mating
 Vocalizing
 Eating
 Prey Item (if known):
 Territorial Disputes
 Courtship
 Other:

Number of Adults: 1
Eaglet Behavior:
 Adult Feeding Eaglets
 Prey Item (if known):
 Sibling Rivalry
 Wing Flapping
 Branching
Number of Eaglets:

Tally Chart (1 tally per minute for each eagle)

Eagle #1	Eagle #2
On the Nest	
Total:30	Total:0
In Sight of Nest	
Total:0	Total:0
Not Seen	
Total:0	Total:30

Traffic Density:
 Heavy (school & rush hour traffic)
 Medium (school or rush hour traffic)
 Light (neither school nor rush hour traffic)
 Rush hours 6:30 AM to 9:00 AM & 5:00 to 8:00 PM
 School hours 6:30 to 8:00 AM & 2:30 to 3:00 PM

Winds:
 (1) None to light
 (2) Moderate
 (3) Heavy
 Wind Direction (from):
 N NE E SE S SW W NW

Interaction with Power Lines:
 Within one wingspan proximity
 Perching on Power Line
 Roosting on Power Pole
 Remarks:

Interaction with Motor Traffic:
Tally (one stroke per encounter)

Within one wingspan away	Total:
Contact with vehicle	Total:
Remarks:	

Specific Observations: eagle sitting on the nest stood up, preened for a bit, turned around and sat down again -

Enter data, save and e-mail to Ms Kelly Smith:
 kelly.smith@browardschools.com

Example of a Unit Menu and Rubric.

(All memos and rubrics may be accessed through the Broward Department of Advanced Academics).

**Life Over Time
Extensions Menu**

<p>Letter to the Editor (individual project) Read Rachel Carson’s “Silent Spring”. Evaluate her arguments that successfully changed the public’s attitude toward the environment. Use these strategies to compose a letter that encourages the public to protect your chosen aspect of today’s environment. Send your letter to a local newspaper</p>	<p>Welcome Back Party (groups of 4) Organize a community celebration of the return of the Pembroke Pines Bald Eagles. Use this as an opportunity to educate the public and elicit their cooperation in preserving the nest site. Details can include invitations, location, advertisement, education about history and needs of bald eagles, guest speakers, donations ??</p>	<p>Eagle Sanctuary Plan (groups of 4) The city of Pembroke Pines would like to preserve our Bald Eagle nest site. Develop a plan that takes into account the many issues surrounding this endeavor. Create a model of your vision for Mrs. Smith to present to the Bald Eagle Steering Committee</p>
<p>Endangered Species Quilt (groups of 1-5) Choose a threatened or endangered species. Research information that will be represented on a quilt that you will construct to show the connectedness among all living creatures. If one square is missing, the quilt is not complete and could fall apart.</p>	<p>Student Choice Create a project about a topic that appeals to you. It should involve learning new, in-depth information that is related to this unit. You will choose some product to create that demonstrates the new concepts that you learned (create a bulletin board, write a song, make a video, design an experiment, etc.)</p>	<p>School Newsletter (groups of 4) Create and publish an STMS newsletter about our Bald Eagles. Include the history of Bald Eagles in America, as well as details about our own eagles. Inform STMS students what is being done, and what they can do to help these national symbols</p>
<p>Museum Display (individual project) Research the Permian period and plan and create a museum display. In your research you will discover what species became extinct, and what species are modern relatives. Create a display using art and text to display the organisms and their modern relatives</p>	<p>Species Timeline (individual project) Find out about a species that has become extinct. Present a timeline giving the history of that species and describe some of its ancestors and surviving relatives. Describe when it was last seen and some possible causes for its extinction</p>	<p>Create a Species (individual project) Imagine a species that may live 1million years in the future. Write a journal about the discovery of this species and create a model of it. Use what you have learned about how organisms adapt to their environments and how humans are altering their ecosystems.</p>

Name _____ Period _____ Date _____

EVALUATION RUBRIC: MAKE A SCHOOL NEWSLETTER

Content	Completely	Mostly	Partially	Poorly
Includes important background of Bald Eagle history and biology	5	4	3-2	1-0
Addresses the significance of the return of eagles to Pembroke Pines	5	4	3-2	1-0
Discusses the current threats to eagles and other wildlife in Florida	5	4	3-2	1-0
Summarizes the communities efforts to preserve ecosystems across Florida	5	4	3-2	1-0
Contains a variety of material such as facts, opinions, quotes from specialists, cartoons, photos, drawings, crossword puzzles, etc.	5	4	3-2	1-0
Notes are comprehensive and neatly written. Bibliography includes sufficient, reputable resources. Each student submits own notes and bibliography	5	4	3-2	1-0
Visual	Completely	Mostly	Partially	Poorly
Neatly organized-placement of articles shows thought towards design and continuity	5	4	3-2	1-0
Newsletter is visually appealing with attention to easily read fonts, efficient use of space on the paper, and a variety of article sizes	5	4	3-2	1-0
Selects effective visuals that grab the reader's attention and highlight main points discussed in the articles	5	4	3-2	1-0
Use of Allotted Time	Completely	Mostly	Partially	Poorly
Efficient and productive use of class time. Product is completed and submitted on time.	5	4	3-2	1-0
"Special Something" extra credit				
Project has some outstanding aspect	5			
Subtotal:				

Total _____ = _____

Unit Project
School Newsletter (1-4 students)

PRODUCT: School Newsletter

SUBJECT: Pembroke Pines Bald Eagles

Research and Take Notes

- **Research about Bald Eagles.** Use the internet, the library and classroom resources to find information about the history and biology of Bald Eagles in America, and especially here in Florida. Discover why they were put on the Endangered Species list, and how and when they were removed. Gather specific information about the return of eagles to Pembroke Pines and what our expectations are for the future. You may want to focus on how our “urban eagles” are different than the typical eagles, and specific things that are being done to help them survive in our neighborhood.
- **Take notes.** Paraphrase or write notes in your own words from the materials you research. Do not copy information from the internet, but you may print pictures that are not copy-write protected (you must have permission from the publisher).
- **Create a bibliography.** Include multiple reputable resources to make your newsletter believable. Be prepared to refer to your sources within your articles so that your reader will trust what you are saying.

Plan and Make your Newsletter

- **Make a plan.** Review your notes and decide what is most important to convey to the public. Just as in a real newspaper, you should report on the most important, accurate and interesting facts.
- **Choose an organization.** Choose an order for how you will present the information. For example, you could report on the history of the Bald Eagle and follow with important facts about their ecosystem. Or maybe you want to start off your newsletter with the most exciting information, the return of the eagles to Pembroke Pines? Try to plan your newsletter so it is fun and easy to read, filled with interesting information, answers the public’s questions and offers them ways that they can help the eagles.
- **Include some fun.** Your newsletter should appeal to a wide range of readers. Be sure to plan for some entertainment in the form of photos, illustrations, cartoons, or even some “strange but true” facts.

Present your newsletter

Share with the class. Present your newsletter to the class. If you have the resources, try to make multiple copies to be distributed around the room. If the newsletter is really good, maybe we can get copies distributed throughout the school. But why stop there? How about placing your newsletter in the community; local libraries, small businesses? We want everyone to help our eagles!

Example of actual field data sent from collaborating wildlife biologist, and used to analyze home territories of several Florida Bay Bald Eagles (data from 1 of 3 eagles):

This data represents Bald Eagle #63, movement #2

ID NO.	Date	Time	Code	Latitude	Longitude
46263	#####	18:23:13	A	25.107N	80.845W
46263	#####	1:07:17	A	25.110N	80.815W
46263	#####	13:23:17	A	25.116N	80.828W
46263	#####	20:42:46	A	25.060N	80.785W
46263	#####	11:50:47	2	25.111N	80.811W
46263	#####	16:49:12	2	25.093N	80.805W
46263	#####	20:00:45	A	24.688N	81.085W
46263	#####	1:58:31	A	25.132N	80.810W
46263	#####	4:56:16	A	25.154N	80.832W
46263	#####	11:16:43	2	25.115N	80.783W
46263	#####	20:51:23	A	25.233N	80.962W
46263	#####	13:59:09	3	25.115N	80.823W
46263	#####	18:02:12	A	25.024N	80.845W

Copy of program flyer for in-house field trip opportunities provided by collaborating wildlife biologist. Students participated in the Action Program 3- and Assembly Lecture 5:



Institute of Wildlife Sciences

16531 SW 81 Avenue
Palmetto Bay, Florida 33157
305-975-0200
www.instwildlifesciences.org
mealey@instwildlifesciences.org

WSI: Wildlife Scene Investigation

The Institute of Wildlife Sciences was originally founded in 1983 with the mission of perpetuating the future of wildlife through the engagement of scientific studies, providing motivating educational programs and supporting government agencies and non-profit corporations in the preservation and conservation of natural ecosystems. In 2003, the organization changed its name, vision and mission to reflect the corporation’s new focus and goals with wildlife issues. We have come to realize that the continuous existence of wildlife is directly linked to enhancing scientific and mathematical literacy of children and families. We recognize that global communities must actively participate in resolving environmental issues to ensure a better quality of life for all planetary inhabitants.

The program, **Wildlife Scene Investigation (W.S.I)**, involves merging the Institute’s field research data and results with the development of action based hands on instruction. Students will be working directly with a scientist/ researcher as they learn to integrate, analyze and interpret real existing data. The level of complexity incorporated into the program will vary depending on the level of understanding and age of the children. Program is designed for middle school students and enhances **FCAT** Science and Math Skills.

Action Program 3: *Tracking Animals: Monitoring Bald Eagle, Osprey and Terrapin movements using telemetry (radio-tracking) (Ornithology)*

Track and find the hidden animals on campus. Apply current eagle satellite tracking data using x and y coordinates and integrating numbers into latitude and longitude for global location.

Assembly Lecture 5: *“Life of a Scientist”*

A dynamic presentation referencing challenges in a scientific career. The presentation revolves discussing our field research with Bald Eagles, ospreys and estuarine reptiles including the eastern diamondback rattlesnakes. This career requires knowledge in math, science, accounting, fundraising and people skills. Students will leave with a sense of complexity and why they need to learn the skills, NOW!

Student Products:

Earth’s Waters Unit Projects

Each product is accompanied by evidence of extensive research in written reports or verbal explanations.





Bald Eagle Cooperative Project

The following rubric was used to assess group and individual performance in designing the Bald Eagle Study. Each student received an individual score based on their own responsibilities. This score was averaged in with the overall group score.

The group as a whole

Ideas and Content	Completely	Mostly	Partially	Poorly
The topic is well researched and quality information is presented	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0
All of the required elements are presented including nest details, materials and procedures, behavioral checklist, data table and calendar	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0
The presenters are all well informed and able to answer questions about their product	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0
The information is presented in a neat and clear format that shows care and attention to detail	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0

Individual Responsibilities

Nest Details

Member name _____ individual score _____ total score _____

Information from Eagle Watch form is included in the description: county, nest site #, location and directions, tree and nest conditions, status last year, surrounding activities	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0
A reader would get an accurate impression of the nest site and its surroundings by reading this description	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0
Description is in paragraph form	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0
Writing is clear, precise with good word choice and flow of information	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0

Materials and Procedures

Member name _____ individual score _____ total score _____

Materials are listed prior to procedures	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0
Attempts to control variables-where observer stands, clothing, behavior, car parking etc.	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0
Detailed instructions on how to complete the checklist are included	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0
Procedures allow the hypothesis to be tested-must include measurable traffic levels and nest proximity	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0

Observational Checklist

Member name _____ individual score _____ total score _____

Checklist is neat and easy to understand, with items appearing in a logical order	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0
Information needed to test the hypothesis are included and measurable- traffic levels, amount of time at each nest proximity	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0
Behaviors from Eagle Watch are included for both adult eagles and eaglets	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0
Important information such as observer's name, date of observation, total number of minutes observed , weather conditions and comments are included	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0

Data Tables and Calendar

Member name _____ individual score _____ total score _____

Titles include reference to the independent and dependent variables	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0
All pertinent information is included-tables have date/time of observation, traffic level and nest proximity, Calendar includes holiday and no school information and spaces for at least 2 people to sign up for making observations	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0
Tables/Calendar are neatly presented	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0
Shows accuracy in spelling, grammar and content	10 - 9	8 - 7 - 6	5 - 4 - 3	2 - 1 - 0

VI. Contact Person

Name: Kelly Smith
Position: Science teacher, grade seven
Address: 18300 Sheridan St.
Pembroke Pines, FL 33331
Phone: (754) 323-4300
E-Mail: kelly.smith@browardschools.com

Hernando County School District

Project Title: *Kids Know Best*

I. Project Rationale and Goals

A. Project Rationale

Hernando County gifted students in grades 6-8 will collaborate with Weeki Wachee Springs State Park educational program coordinators and community volunteers as part of an interdisciplinary project designed to revamp the park's educational programs, activities, and instructional materials.

B. Project Goals

- All middle school gifted science and social studies teachers, and Weeki Wachee Springs State Park educational program specialists will collaborate to develop a formal project calendar, unit plan, and lesson plans.
- All gifted students will collaborate to produce attractive multimedia presentations of improved, student-friendly Weeki Wachee Springs State Park educational programs, activities, and instructional activities, and effectively present the results of their collaborative efforts to park employees and community volunteers.

II. Project Implementation

A. Project Activities

Students took part in field trips to the Museum of Science and Industry, Silver Springs, Weeki Wachee, and the Dali Museum in order to conduct hands-on research into the types of educational activities that can be provided. Additionally, on-site activities and labs were provided to further enhance the student's experience. These activities included water testing and conservation activities and tree core sampling activities provided by the Southwest Florida Water Management District and instruction in the use of GPS.

B. Curriculum Content Focus

The project focused on *Florida's Frameworks for K-12 Gifted Learners* and the Next Generation Sunshine State Standards. As a result of pre-testing, it was found that students would most benefit from an emphasis on research skills, developing questions to guide research, organizing information, and redirecting research. Gifted curriculum strategies such as the Taba model and the Research model were used as well as graphic organizers like the Need-to-Know-board and the analysis of a situation or event, all provided by William and Mary specifically for gifted students.

Students were assessed using a rubric based on the Gifted Frameworks. For pre-assessment purposes, students were assessed on problem solving, science laboratory, and research skills using the same rubric. Students were again assessed at mid-year and at the end of the year based on their ongoing work with the Kids Know Best (KKB) project.

C. Next Generation Sunshine State Standards Addressed

Math

- MA.6.A.1.3 solve real-world problems involving fractions and decimals
- MA.6.A.3.4 solve problems given a formula
- MA.6.4.2 find the perimeters and areas of two dimensional figures including nonrectangular figures using various strategies
- MA.7.S.6.1 evaluate the reasonableness of a sample to determine the appropriateness of generalizations made about populations
- MA.8.A.3.1 use tables, graphs and models to represent, analyze and solve real world problems related to systems of linear equations
- MA.8.G.5.1 compare, contrast, and convert units of measure between two different measurement systems and dimensions including temperature, area, volume to solve problems

Social Studies

- SS.6.G.1.4 utilize tools geographers use to study the world
- SS.6.W.1.1 use timelines to identify chronological order of historical events
- SS.W.1.3 interpret primary and secondary source
- SS.7.G.5.1 use choropleth map or other map to geographically represent current information about issues of conservation or ecology in the local community
- SS.7.C.2.3 experience the responsibilities of citizens at the state and local levels
- SS.8.A.1.4 differentiate fact from opinion, utilize appropriate historical research and fiction/nonfiction support materials

Science

- SC.6.E.6.2 recognize that there are a variety of landforms on Earth's surface such as coastlines, dunes, rivers, mountains, glaciers, deltas, and lakes and relate these landforms as they apply to Florida
- SC.6.E.7.8 describe ways human beings protect themselves from hazardous weather and sun exposure
- SC.6.N.1.5 recognize that science involves creativity, not just designing experiments, but also in creating explanations that fit evidence
- SC.7.E.6.6 identify the impact that humans have had on earth, such as deforestation, urbanization, desertification, erosion, air and water quality changes
- SC.7.L.17.2 compare and contrast relationships among organisms such as mutualism, parasitism, competition, and commensalism
- SC.8.E.5.9 explain the impact of objects in space on each other including (1) the Sun on Earth including seasons and gravitational attraction and (2) the Moon on Earth including phases, tides and eclipses and the relative position of each body
- SC.8.N.4.2 explain how political, social, and economic concerns can affect science and vice versa

Reading/Language Arts

- LA.6.1.5.1 adjust reading rate based on purpose, text difficulty, form, and style
- LA.6.2.1.5 develop an interpretation of a selection and support through sustained use of examples and contextual evidence
- LA.6.3.1.1 prewrite by generating ideas from multiple sources (e.g. prior knowledge discussion with others, writers notebook, research materials, or other reliable sources), based upon teacher directed topics and personal interests

- LA.6.3.1.2 prewrite by making a plan for writing that prioritizes ideas, addresses purpose, audience, main idea, and logical sequence
- LA.6.3.1.3 prewrite by using organizational strategies and tools (e.g. technology, outline, chart, table, graph, web, story map)
- LA.6.4.2.1 write in a variety of information/expository forms (e.g. summarizes, procedures, instructions, experiments, rubrics, how to manuals, assembly instructions)
- LA.6.4.2.2 record information (e.g. observations, notes, lists, charts, legends) related to a topic, including visuals to organize and record information and include a list of sources used
- LA.6.4.2.3 write information/expository essays (e.g. process, description, explanation, comparison/contrast, problem/solution) that include a thesis statement, supporting facts, and introductory body and concluding paragraphs
- LA.6.4.2.4 write a variety of informational communications (e.g., friendly letters, thank-you notes, messages) and formal communications (e.g., conventional business letters, invitations) that follow a format and that have a clearly stated purpose and that include the date, proper salutation, body, closing and signature
- LA.6.4.2.5 write directions to unfamiliar locations using cardinal and ordinal directions, landmarks, and distance, and create an accompanying map
- LA.6.6.2.2 collect, evaluate and summarize information using a variety of techniques from multiple sources (e.g., encyclopedias, websites, experts) that includes paraphrasing to convey ideas and details from the source, main idea(s), and relevant details
- LA.7.3.2.1 draft writing by developing main ideas from the pre-writing plan using primary sources appropriate to the purpose and audience
- LA.7.3.3.1 revise by evaluating the draft for development of ideas and content, logical organization, voice, point of view, word choice, and sentence variation
- LA.7.5.2.1 use effective listening strategies for informal and formal discussions, connecting to and building on the ideas of a previous speaker and respecting the viewpoints of others when identifying bias or faulty logic
- LA.7.5.2.3 organize and effectively deliver speeches to entertain, inform, and persuade demonstrating appropriate language choices, body language, eye contact, gestures and the use of supporting graphics and technology

Florida Frameworks for Gifted Learners

All goals were incorporated

D. Instructional Methodology Used

The project was first introduced as an ill-structured problem with additional information given throughout the first part of the school year requiring the students to continuously review and analyze the problem to be solved. For example, students were told Weeki Wachee wanted to develop more interesting programs for students. Eventually students were presented with information requiring any activities to be educational and relate specifically to Florida. Students used ‘Need-to-Know’ boards (developed by the College of William and Mary specifically for gifted curriculum) where they redirected their thinking and research questions.

Other William and Mary resources used for the purpose of research and organization were the Research Model, the Taba model, and a graphic organizer titled ‘Analysis of a Situation or Event’, more advanced students were given a ‘Reasoning Wheel’ graphic organizer in which to analyze issues they identified within this project.

Students were assigned to groups larger than 4 individuals in order to meet the requirements of student EP's reflecting a need to work in and lead a group of more than 4 students. Students with this leadership goal were assigned as the leader/manager.

Differentiation occurred more within the scope of the gifted learner frameworks than content since that seems to be where the most variation occurred. Within groups, students were encouraged to play to their strengths in the product and content/interests. After observation, it was agreed that the processes of research and organization were areas all students needed to focus and improve upon.

E. Nature of the Collaboration

Collaboration between the teachers of gifted and participating students occurred at a minimum of three days per week and one-half hour per each session. We used the silent sustained reading/homeroom time to work on this project allowing for students to move between classrooms as necessary to communicate with other students or teachers. Students were also able to communicate with community members via telephone or email during this time. All teachers involved were aware of the requirements of the KKB project and were able to assist students, participate in the learning activities, and develop lessons.

Participants

Participants	Number	Participants	Number
Gifted Students Grade 6: 46 Grade 7: 35 Grade 8: 22	101	Teachers of Gifted	5
ESE Students (dual gifted/ESE)	2	General Education Teachers	3
Administrators	1	Parents	20
Community Members:	10	Other Participants:	1
Total Participants	142		

Personnel

Personnel ranged from a county level administrator to an on-site assistant principal. The primary personnel involved were the core curriculum teachers with support from parents and Weeki Wachee personnel, particularly finance director John Athanason.

III. Evaluation

A. Assessment of Student Performance

Assessment of student performance was completed using the rubrics developed in the Frameworks for K-12 Gifted learners (see attached). Students were assessed three times over the course of the school year- a pre-test, midyear, and at the end of the year. Points were assigned to each category for the sake of measurement and expectations were modified per grade level. All students made progress in most areas. Notably organizing researched information and using a greater variety of sources (i.e., primary and secondary sources) to include print sources and original documents (maps, budget outlines, historical accounts, interviews, and surveys). FCAT scores for the 2009/10 school year are not available at this time.

B. Project Evaluation

The program was a success in that many students found it enticing to research and make recommendations to a local state park. It was also successful in providing valuable information about individual strengths and weaknesses above and beyond information provided in cum files and/or EP's. The same sixth and seventh grade students will be able to continue enhancing their skills during the 2010-11 school year as seventh and eighth graders. The assessment results will provide valuable information when designing lessons and differentiating in the future.

IV. Dissemination

The end result of the student's work was a luncheon provided for participants, parents and administrators where students who had created exemplary multimedia presentations were able to share their work. All students presented their projects previously to their peers. In addition to the *Florida Frameworks for Gifted* student rubric, a rubric for presentations was completed as well as self and peer evaluations. Based on these rubrics the top performers were asked to participate in this luncheon. 62% of the groups involved participated in this culminating activity. The majority of these students were seventh and eighth graders as was to be expected since they had the most experience with a challenging middle school program. The sixth grade students made great progress through the year and have a better understanding of the level of expectation in middle school.

V. Budget

Item	Unit	Cost
Garmen eTrex Venture handheld GPS	20 @ \$149.99	\$2999.80
Cannon Powershop 10 megapixel camera	5 @ \$129.99	\$649.95
JVC camcorder 60 GB hard drive	2 @ \$ 379.99	\$759.98
Video card cables, rechargeable batteries, battery chargers, rewritable discs		\$1000.00
Admission MOSI	90 @ \$13.00	\$1170.00
Admission Dali Museum	90 @ \$ 8.00	\$720.00
Admission Silver Springs	90 @ \$10.00	\$900.00
Total		\$8199.73

VI. Contact Person

Name: Leanne Blackwell
Position: Teacher of Gifted Science
Phone: (352) 797-7000
Address: not provided
E-mail: Blackwell_12@hcsb.k12.fl.us

PEER GROUP EVALUATION (To be submitted to Mrs. Blackwell)

Project Name _____

Your Name _____

I. Names of your group members. (The letter corresponds to the student's name.)

- a. _____ f. _____
- b. _____ g. _____
- c. _____
- d. _____
- e. _____

Performance in the Learning Community

II. Rank each member (a,b,c,d,e,f,g) with a 4,3,2,1,0 (4=highest,0=lowest)

1. Reliable for meetings

- a. _____ b. _____ c. _____ d. _____ e. _____ f. _____ g. _____

2. Reliable with meeting deadlines for work in progress and final project

- a. _____ b. _____ c. _____ d. _____ e. _____ f. _____ g. _____

3. Contributes ideas to the group

- a. _____ b. _____ c. _____ d. _____ e. _____ f. _____ g. _____

4. Respects each group member's opinions

- a. _____ b. _____ c. _____ d. _____ e. _____ f. _____ g. _____

5.. Contributes his/her share to discussions

- a. _____ b. _____ c. _____ d. _____ e. _____ f. _____ g. _____

6. Knowledgeable about assignments and her/his role and fulfills that role

- a. _____ b. _____ c. _____ d. _____ e. _____ f. _____ g. _____

7. Gives input for work-in-progress promptly and with a good faith effort

- a. _____ b. _____ c. _____ d. _____ e. _____ f. _____ g. _____

III. If given the opportunity, would you want to work with this team member again?

("Yes"= 4 points; "Maybe"= 2 points; "No"= 0 points)

- a. _____ b. _____ c. _____ d. _____ e. _____ f. _____ g. _____

IV. In one sentence, what is your overall impression of each member's performance?

- a) _____
- b) _____
- c) _____
- d) _____
- e) _____
- f) _____
- g) _____

[Don't base your evaluations on friendship or personality conflicts. Your input can be a valuable indicator to help assess contributions in a fair manner. THESE EVALUATIONS WILL NOT BE SEEN BY YOUR GROUP MEMBERS.]

Return to Web Site of [Virginia Montecino](#)

Individual Research Plan Rubric

This rubric will be used to evaluate your research plan that you completed using Renzulli’s Wizard Project Maker.

Content

- a) Content is accurate and thorough in detail 0 1 2 3 4 5 6
- b) Content and research conclusions show depth and complexity of thought. 0 1 2 3 4 5 6
- c) Content is put together in such a way that group members can understand it. 0 1 2 3 4 5 6

Planning

- a) All parts of the plan are completed in a thorough and professional manner 0 1 2 3 4 5 6
- b) The plan clearly states the methods for research, the responsibilities of the researcher, and possible materials 0 1 2 3 4 5 6
- c) The plan clearly states the problem to be solved or researched 0 1 2 3 4 5 6
- d) The plan provides due dates and check point dates for conferencing and completion 0 1 2 3 4 5 6
- e) Reference to the group plan is apparent 0 1 2 3 4 5 6

Creativity

- a) Individual insight is expressed in relation to the content (your thoughts and ideas are stated) 0 1 2 3 4 5 6

Reflection (use the back of the paper to complete)

- a) What did you learn about the content as you completed the research? 0 1 2 3 4 5 6
- b) What did you learn about yourself as a learner through this research? 0 1 2 3 4 5 6

Performance scale

- 6- Professional level; level expected from a professional in the content area
- 5- Advanced Level; level exceeds expectations of the standard
- 4- Proficient Level; level expected for meeting the standard
- 3- Progressing Level; level demonstrates movement toward the standard
- 2- Novice Level; level demonstrates initial awareness and knowledge of standard
- 1-Non-performing Level; level indicates no effort made to meet standard
- 0-Non-participating

Grading	
66 pts	100%
55-65.....	95%
44-54.....	90%
38-43.....	80%
33-37.....	75%
27-32.....	70%
22-26.....	65%
<22.....	unacceptable

Highlands County School District

Project Title: *ENGAGE*

I. Project Rationale and Goals

A. Project Rationale

Participating in a service learning project at the elementary level provides students with an awareness of community needs and the development of civic responsibility. The service learning experience addresses gifted educational plan (EP) goals in the area of social/emotional behavior through specific leadership skill development and interpersonal skills necessary for life-long success. Students further their leadership skills by working with peers and community members. It enables the students to learn new skills, build supportive relationships with adults, gain a sense of accomplishment, and see how their actions positively impact others. Student learning is impacted across the curriculum in humanities, language arts, mathematics, and social sciences. All of these experiences better prepare elementary gifted students for their transition into the IB environment and a lifetime of community service.

B. Project Goals

1. *Engage* will provide a collaborative process, through an authentic learning experience that connects school to real-world problem solving and decision making within the community, by affording meaningful ways for students, teachers, and community agencies to work together toward a common purpose that has mutual benefits.
2. *Engage* will employ almost every subject area, through cross-curricular integration and incorporation of technology, thereby helping students grown and improve in several areas simultaneously.
3. *Engage* will provide differentiated learning experiences matched to students' interest, readiness, and talents while addressing their social-emotional needs as they make authentic contributions to solving real world problems.
4. *Engage* will empower students to learn the basics of business, teamwork and leadership while becoming financially responsible, contributing members of society.

II. Project Implementation

A. Project Activities

The students participated in investigative field trips, service field trips, promotional school-based TV commercials, school-wide drives, a mini business unit, celebration of service and art projects to commemorate each service provider.

B. Curriculum Content Focus

The curriculum centered around the development and implementation of a plan of action. Students did research into their community and services available for families. Students worked through three areas of focus: Evaluate Need (involving field trips, interviews, research, and a decision about which service provider to assist); Give Assistance (involving a field trip to gain knowledge, do interviews, and tour the site, development of a plan of action, creation of a mini-

business to raise funds for the service provider); Gauge Effectiveness (involving final reporting on how effective their efforts were in assisting the service provider they had chosen).

Specific thinking skills were taught in creative thinking and critical thinking. Students were taught critical and creative thinking skills directly, then allowed to apply them in a variety of problem situations. They applied metacognition skills (thinking about thinking) through discussion and debriefing after problem solving situations. Bibliotherapy, or the use of books to help people solve problems, was used extensively throughout the year. The books helped open discussion about topics that are troublesome to gifted students, including homelessness, poverty, and hunger. The service learning connected directly to the concerns and allowed students to see how they might make an impact in helping to solve big problems in our world. Students also read about and discussed prominent people from history and current everyday heroes who help to make a difference to others.

C. Next Generation Sunshine State Standards Addressed

Social Studies

- SS.1.C.2.3 identify ways students can participate in the betterment of their school and community
- SS.2.C.2.4 identify ways citizens can make a positive contribution in their community
- SS.3.C.2.1 identify group and individual actions of citizens that demonstrate civility, cooperation, volunteerism, and other civic virtues
- SS.4.C.2.3 explain the importance of public service, voting, and volunteerism, and other civic virtues
- SS.5.C.2.5 identify ways good citizens go beyond basic civic and political responsibilities to improve government and society

Math

- MA.2.A.2.2 add and subtract multi-digit whole numbers through three digits with fluency by using a variety of strategies , including invented and standard algorithms and explanations of those procures
- MA.5.A.4.2 construct and describe a graph showing continuous data, such as a graph of a quantity that changes over time

Language Arts

- LA.5.1.6.1 use new vocabulary that is introduced and taught directly
- LA.5.1.6.2 listen to, read, and discuss familiar and conceptually challenging text
- LA.5.2.2.3 organize information to show understanding
- LA.5.3.5.1 prepare writing using technology in a format appropriate to audience and purpose
- LA.5.3.5.3 share the writing with the intended audience
- LA.5.5.2.1 listen and speak to gain and share information for a variety of purposes, including personal interviews, dramatic and poetic recitations, and formal presentations
- LA.5.5.2.2 make formal oral presentations for a variety of purposes and occasions, demonstrating appropriate language choices, body language, eye contact and the use of gestures, the use of supporting graphics(charts, illustrations, images, propos) and available technologies

Visual Arts

- VA.B.1.1 creates and communicates a range of subject matter, symbols, and ideas using knowledge of structures and functions of visual arts

D. Instructional Methodology Used

The redesign of instruction was based on recommendations of NAGC’s position paper that included “acceleration of instruction; in-depth study; a high degree of complexity; advanced content; and/or variety in content and form.” The instruction included strategies from Dr. Bertie Kingore’s *Differentiation: Simplified, Realistic, and Effective* (2004), that include: Flexible grouping, problem-based learning, students as producers, thinking and inquiry, product options, research and independent study. The use of differentiation as suggested in the *Florida Frameworks for Gifted* was implemented in this unit of study.

E. Nature of the Collaboration

Ten local service providers collaborated with gifted education teachers to provide information to students about their role in the community, the services they provide and the number of families they impact per year. Representatives from each organization participated:

- American Red Cross
- *Children’s Advocacy Center
- Children’s Home Society
- Habitat for Humanity
- *Heartland Food Bank
- *Heartland Horses and Handicapped
- Manna Ministries
- *New Testament Church and Mission
- NuHope
- *Salvation Army

Representatives from five (indicated with *) of the service providers collaborated more intensely after students chose to advocate for their organization. Representatives allowed students to conduct interviews, tour the facility, and assist in hands-on projects. They, along with volunteers at the organization, worked closely with students to determine how they could best help the organization, develop a plan of action, and implement the plan. Volunteers at all the locations collaborated with gifted education teachers to plan and organize field trips for investigation and assistance. They also worked alongside students.

Technology experts in the county collaborated with the gifted education teachers to determine which technology and software would be most beneficial for students. Professional development was conducted for the teachers who then trained students to use the technology. High school Art teachers collaborated with gifted education teachers and high school students to develop commemorative art experiences for the “Celebration of Service” field trip that was a culmination of the *Engage* project. Students rotated through five stations that displayed student products and participated in an art activity specific to and commemorative of each service provider.

Participants

Participants	Number	Participants	Number
Gifted students	126	Teachers of gifted	5
Administrators	9	General education teachers	2
Community members	58	Parents	71
		Other participants	29
		Total participants	300

Student Population

Gifted students participating

- Grade 1 3 students
- Grade 2 24 students
- Grade 3 28 students
- Grade 4 30 students
- Grade 5 41 students

Personnel

Gail Melendy	Highlands County gifted specialist and teacher
Laura Carter	Gifted education teacher
Patricia Carter	Gifted education teacher
Mollie Stephens	Gifted education teacher
Heidi Stivender	Gifted education teacher
Darrell Layfield	Technology Specialist for Highlands County
Fontaine McAuliff	Media Specialist at Lake Placid Elementary
Jack VanDam	High school Art teacher
Steve VanDam	High school art teacher

Eighteen high school art students

III. Evaluation

A. Assessment of Student Performance

Student learning was evaluated through a variety of methods. During the *Engage* unit, a pre/posttest evaluation was administered. Comparison of pre- and posttests indicated results in the effectiveness of the learning project.

100% of students demonstrated mastery of at least 80% on the posttest.

Rubrics were used for evaluation of student products, leadership and teamwork.

Product rubric: 90% of students met the criteria of 12/15

Leadership rubric: 90% of students met the criteria of 11/14

Teamwork rubric: 79% of students met the criteria of 12/15

Oral Presentation rubric: 100% of students met the criteria of 19/24

Written Product rubric: 100% of students met the criteria of 4.0

Each student maintained a reflective journal which allowed them to reflect on learning and experiences during the *Engage* study.

Educators of the gifted regularly collected and compiled evidence using students' journaling and discussion to evidence academic gains and the impact on learning. Students were able to integrate both the learning and the service into their frameworks of experience. Ongoing reflective journaling and discussion used higher levels of thinking as students discussed and clarified information.

All students maintained a reflective journal which served to demonstrate their knowledge of learning and clarified and documented their understanding through the service learning experience. Through the journaling process students:

- connected their experience with classroom content and studies
- integrated their experience with other areas of their lives
- developed a sense of community among the class or with partners
- were able to clarify misunderstandings, perceptions, or biases
- improved their observation and analytical skills
- developed an appreciation of others in the groups and their community
- deepened their knowledge and understanding of community and social issues

Students engaged in developing learning products such as brochures, pamphlets, flyers, powerpoint presentations, photo stories, and oral presentations. Learning products were chosen based on student interest while allowing students to work at their own rate and interact with

knowledge at a higher level. Learning products helped students to develop concepts more fully and enabled students to construct their own understanding. A rubric was created with student input to encourage and provide student ownership of their product. The rubric was used throughout to enable students, parents, and the teacher to better understand the criteria and expectations of progress. The rubric clearly linked objectives and outcomes which allowed students to accept responsibility for the outcomes and lead to a quality project. This tool made it easier for students to understand the impact of learning and their own academic gains to provide clear evidence of their accomplishments.

Students used a portfolio as a vehicle for reflection. The portfolio was a meaningful way to identify progress, show evidence of success, support evaluation and to indicate additional learning needed. The portfolio was a medium for facilitating ongoing feedback during the learning process.

100% of participating students maintained a portfolio.

B. Project Evaluation

100% of students accomplished their plan of action. Results were recorded:

Care boxes delivered	42
Food bags stocked	400
Toy stockings stuffed	100
Book drive donations	700 books
Canned food delivered	300 pounds
Money raised and donated	\$4,045

All targeted outcomes were achieved.

Continuation plans include only the affective aspects of the service learning with students engaging in bibliotherapy in the 2010-11 school year.

IV. Dissemination

Information regarding the Engage project was disseminated in the following ways:

- A website (http://highmail.highlands.k12.fl.us/~SBHC_Gifted) was created and maintained throughout the project to inform parents of student activities.
- Monthly newsletters detailing each month's activities were sent to parents and school administrators.
- Two articles in the local newspaper addressed student activities.
- Students' advocacy projects, photographs, and news reports were broadcast on televised school announcements throughout the project to spread the word to students, teachers, and administrators.
- Some students participated in local "Market Days" to sell products they had made and to make the community aware of their fundraising efforts.
- Gifted education teachers presented an overview of the project to the District School Advisory Committee (DSAC) on March 8, 2010. A gifted student presented her advocacy project and samples of other student projects were on display.
- Students presented their advocacy projects to local civic organizations in May.
- Student projects were on display at the "Celebration of Service" field trip May 13, 2010, in which all elementary gifted students participated.
- A workshop proposal was sent to the Florida Association for the Gifted to present the project at the upcoming conference.

V. Budget

Item	Cost
Supplies	\$4,341.55
Audio-Visual	\$3,995.16
Professional and Technical Services	\$421.52
Transportation (buses)	\$1,235.11
Total	\$9,993.34

VI. Contact Person

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**Marion County School District
Marion Technical Institute**

Project Title: *Academy of Law and Government*

I. Project Rationale and Goals

A. Project Rationale

The project rationale included enhancing the academic performance of gifted students through implementing an innovative instructional program aligned with community-based, collaborative partners. Through the development and utilization of the *Academy of Law and Government*, gifted and high achieving students were provided challenging educational and life experiences related to careers in law and government. This new instructional design included extensive innovative community involvement. Active participants included Fifth Judicial Circuit Court Judges, the Marion County Bar Association, Marion County Board of County Commissioners, Marion County Sheriff's Department, Ocala Police Department and Ocala City Government. The project was and is unique in Marion County and without this program, the opportunity for these gifted students would not exist.

B. Project Goals

The goals of the *Academy of Law and Government* included enhancing gifted students' learning and performance through challenging them intellectually. Supported through this project, by their graduation from high school, the gifted students were expected to and now are able to:

- Critically examine the complexity of knowledge
- Create, adapt, and assess multifaceted questions in a variety of fields/disciplines
- Conduct thoughtful research/exploration in multiple fields
- Think creatively and critically to identify and solve real world problem
- Assume leadership and participatory roles in both gifted and heterogeneous group learning situations
- Set and achieve personal, academic, and career goals
- Develop and deliver a variety of authentic products/performances that demonstrate understanding in multiple fields/disciplines
- Review options for college and career fields, allowing them to see and secure the appropriate location and program to continue their education and/or employment

II. Project Implementation

A. Project Activities

Gifted students were involved in a plethora of new learning experiences and extended educational opportunities, in addition to utilizing the new curriculum program. Gifted students were involved in:

- Sitting in on trials and being "behind the scenes" in court hearings
- Working in the classroom and in the workplace with attorneys in Marion County and the Fifth Judicial District and Supreme Court Justice Lewis
- Participating in the Marion County and Fifth Judicial District *We The People* competitions on US Constitutional Law
- Having outside speakers presenting once-a-month during classes and during lunches (provided through donations) on topics ranging from copyrights on printed and non-print

- media (music, films, etc.), judges, Florida Representative Kurt Kelly, law enforcement officials – including one who handled serial murder investigations
- Attending Marion County Bar Association meetings
 - Preparing and completing the Florida Ready-to-Work certification testing
 - Completing extensive research and written papers and other case law documentation
 - On-site visits in the Marion County Sheriff’s Department’s Forensics Lab and the Ocala Police Department’s Forensics Lab, and hosting the Marion County Coroner
 - Accessing the Marion County Courthouse Law Library and holding class meetings there
 - Job shadowing City of Ocala officials and staff, including Mayor Randy Ewers, Councilman Kent Guinn, and others
 - Participating in the Career Expo at Marion Technical Institute
 - Visiting Tallahassee and meeting with Representative Kurt Kelly, Senator Ed Dean, being recognized in the Florida House of Representatives chambers during Representative Kelly’s speech, being swept up in the paparazzi following Governor Crist, and meeting with Florida Supreme Court Judge Lewis
 - Attending and competing in the Florida State Mock Trial competition, and
 - Preparing for the national ALS certification assessment (which is a test identified through Perkins funding as well as Florida Career and Technical Education program)
 - Having a gifted student/classmate chosen as *one of two* Florida high school students to go to the United States Senate Youth Program in Washington, DC for a week

B. Curriculum Content Focus

Specific courses (plus academic subjects) include:

- Legal Aspects of Business
- Legal Office Technology I
- Legal Office Technology II
- Business Law
- We The People (History/Constitutional Law)

Within these courses and in programs outside of the classroom, students participated in a number of extended, enrichment activities allowing them to connect with representatives of various legal professions. Practice for the mock trial competition and similar programs were provided on campus and at the county courthouse. Students used textbooks, workbooks, handouts, online information, and speaker presentations in their studies. Gifted students were competitors in the county and state level competitions and completed extensive research inquiries that also included technology-based presentations.

C. Next Generation Sunshine State Standards Addressed

Social Studies

- SS.A.1.4.1 understands how ideas and beliefs, decisions, and chance events have been used in the process of writing and interpreting history
- SS.A.1.4.2 identifies and understands themes in history that cross scientific, economic, and cultural boundaries
- SS.A.1.4.3 evaluates conflicting sources and materials in the interpretation of a historical event or episode
- SS.A.2.4.4 understands significant aspects of the economic, political, and social systems of ancient Greece and the cultural contributions of that civilization
- SS.A.2.4.5 understands the significant features of the political, economic, and social systems of ancient Rome and the cultural legacy of that civilization

- SS.A.3.4.4 knows the significant ideas and texts of Buddhism, Christianity, Hinduism, and Judaism, their spheres of influence in the age of expansion, and their reforms in the 19th century
- SS.A.3.4.9 analyzes major historical events of the first half of the 20th century
- SS.A.4.4.3 understands the significant military and political events that took place during the American Revolution
- SS.A.4.4.4 understands the significant political events that took place during the early national period
- SS.A.5.4.6 understands the political events that shaped the development of United States foreign policy since World War II and knows the characteristics of that policy
- SS.A.5.4.8 knows significant political events and issues that have shaped domestic policy decisions in contemporary America
- SS.C.1.4.4 understands the role of special interest groups, political parties, the media, public opinion, and majority/minority conflicts on the development of public policy and the political process
- SS.C.2.4.3 understands issues of personal concern: the rights and responsibilities of the individual under the U.S. Constitution, the importance of civil liberties, the role of conflict resolution and compromise, and issues involving ethical behavior in politics
- SS.C.2.4.5 understands how personal, political, and economic rights are secured by constitutional government and by such means as the rule of law, checks and balances, an independent judiciary, and a vigilant citizenry

D. Instructional Methodology Used

This program is totally new and the first of its kind in Marion County and is unique to the state of Florida as well. The gifted students were included as a group and each EP was addressed within the context of the program. The gifted specialist was a regular participant/observer/ consultant assisting with the project’s development and implementation. The curriculum was advanced and extended well beyond the general curriculum. Students were consistently engaged in complex, ambiguous materials to challenge their thinking; requiring students to make real-world applications.

Research-based instructional strategies were used to emphasize inquiry and investigation; building students’ critical thinking skills. Students were intensely involved in conversations about the “whys,” requiring them to reflect on concepts, ethical questions, and rigorous study materials presented. The students were involved in multiple situations outside the classroom where they had to apply what they knew in unpredictable scenarios. The teachers and the gifted consultant monitored students’ progress and their handling of complex materials, issues and ideas. Students regularly reflected on their own growth and increased in skills/knowledge. The teacher (a credentialed attorney) incorporated personal goal setting to encourage increased participation – as well as engaging students to consider the future.

E. Nature of the Collaboration

Advisory Board Members

- | | |
|---|---|
| Robin Arnold, J.D.
<i>Assistant State Attorney</i> | Honorable Barbara Fitos
<i>Marion County Commissioner</i> |
| Christy Bradshaw
<i>CAB Court Reporting Service</i> | Frances Lynch, J.D.
<i>MTI Law and Government</i> |
| Donald W. Bradshaw, J.D. | Douglas Oswald, J.D. |

Attorney at Law
Honorable Dee Brown
Supervisor of Elections
Catherine Cameron
Chief of Staff, City of Ocala
Michelle Cooper
Marion County Legal Support Association
Ann Melinda Craggs, J.D.
Attorney at Law
Dan Kuhn, J.D.
Chief of Staff, Marion County Sheriff's Office
Honorable David Ellspermann
Marion County Clerk of the Circuit Court
Betty Hackmyer, Ph.D.
Vocational Administrator, MTI

MTI Career Academy
Pamela Roberts
Principal, Marion Technical Institute
Honorable Judge Steven Rogers
Marion County Judge
Carol Smith, J.D.
Professor, Central Florida Community College
Renee Thompson, J.D.
Attorney at Law
Samuel Williams
Chief of Police, Ocala Police Department
Mark Vianello
Executive Director, Student Services
Marion County Public Schools

Participants:

Participants	Number	Participants	Number
Gifted students	21	Teachers of gifted	1
General education students	103	General education teachers	4
ESE students	50	ESE teachers	1
Administrators	3	Parents	10
Community members	60		
		Total participants	253

Student Participants

Twenty-one (21) students participated with most being in the eleventh grade, plus a few tenth and twelfth graders attending Marion Technical Institute.

Personnel

Principal, guidance counselor, gifted specialist, project teacher, five academic teachers, vocational administrator, assistant principal (coordinator for curriculum), and other staff assisted in the *We The People* competition, mock trial practices, monthly gifted student meetings, all encouraged students to stay involved and active within classes and project. The program was not easy – these talented, intelligent students had to work! Approximately 200 members of the Marion County Bar Association served as advisors.

III. Evaluation

A. Assessment of Student Performance

Students were assessed in a variety of ways and met the goals of the project. The measurement tools used during the project included:

1. Monthly meetings by the Law Advisory Council (consisting of elected officials, attorneys, and representatives from state agencies).
2. Students, parents and involved project leaders provided information regarding project activities, law curriculum/classes and overall project components at the end of each semester.
3. Students' IEPs were reviewed every nine weeks and the gifted consultant met with students to discuss progress within the project (as well as other classes).
4. Students completed a variety of assignments as part of their academy work and all students maintained grades at 80% or higher.

All gifted students passed the eleventh grade FCAT. In addition, district provided tests were all passed by the project participants.

B. Project Evaluation

The project was evaluated through the Advisory Council, involved teachers, administrative staff, students and parents. The project received excellent reviews and project outcomes were realized. As for a continuation plan, the school/district is supporting the program next year and is hoping to double the number of students included.

IV. Dissemination

The dissemination plan included:

- Extending the training and skill experience acquired by project participants to other classrooms as MTI teachers collaborate to make curriculum more meaningful.
- Project information was shared in the MTI newsletter, morning broadcasts, local media (including the education channel and the Ocala Star Banner), MCPS Fast Facts, courthouse information, school website, and partner communication resources.
- Informational video segments and/or video clips that showcase a variety of successful activities related to the program (through the school television show, district cable channel, and/or news media) were aired.
- Best practices related to gifted students and law/government education were shared through project partners, parents and students.
- Marion County Bar Association received recognition for their support of the project.
- Project activities and results were posted on the school and teacher website pages for public access and viewing.
- Meetings with staff, principals, business partners and advisory board members were scheduled so students could present information about various project components.
- Press releases were distributed to local newspapers, radio and television stations.
- Project progress was shared within the Exceptional Student Services program through the project's gifted education specialist.

V. Budget

Item	Cost
Communications	\$502.00
Purchased services	\$690.00
Supplies	\$99.45
Textbooks	\$4,474.01
Materials and supplies	\$873.00
Computer hardware over \$1,000	\$1,077.00
Computer hardware under \$1,000	\$395.00
Curriculum development (Teachers)	\$1,212.71
Fringe for teachers	\$229.59
Total	\$9,552.76

VII. Contact Person(s)

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Betty Hackmyer, Ph.D.
Vocational Administrator

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**Miami-Dade County School District
Ethel Koger Beckham Elementary School**

Project Title: *Cultivating the Arts, Nurturing Visions for Achieving Success (CANVAS)*

I. Project Rationale and Goals

A. Project Rationale

Cultivating the Arts, Nurturing Visions for Achieving Success (*CANVAS*) will provide students with an opportunity to foster their creativity and bolster a sense of pride in their community creating a tightly woven cultural infrastructure. The recent economic hardships that our nation is facing, has affected our community, significantly. These outcomes have led our parents to withdraw students from extra-curricular activities so they have limited participation in our community's cultural resources. *CANVAS* will provide students with the opportunity to enhance their cultural awareness, starting with their own backyard and eventually providing them with the tools to compete globally. This in turn will enrich the curriculum by providing students with authentic opportunities to develop a sense of pride and a strong positive attitude toward learning.

B. Project Goals

The goal of *CANVAS* is to develop an enriching, motivating curriculum where students apply a "hands-on" approach to all aspects of the gifted program. *CANVAS* promotes the individual study of the arts; thus building the arts into the curriculum and the curriculum into the arts.

II. Project Implementation

A. Project Activities

Architecture

October 14, 2009 – In-House Field Trip

- Students viewed a slide show presentation on the history of architecture, watched a rendering/animation of a new building using REALS.com, a real-estate directory, viewed floor plans that were drafted manually and computer-aided using AutoCAD, and were able to see a scaled model of a home.
- Students participated in a question and answer session with an engineer, a construction manager and architects.
- Presentation on how engineers are involved in construction of a building.
- Presentation on how a construction manager oversees and coordinates all workers involved in the creation of a building.

November 12, 2009 - Deering Estates - Field Trip

- Presentation on the style(s) of architecture used to create these historic buildings in South Miami-Dade County.

Visual Arts

November 24, 2009 - Lowe Art Museum - Field Trip

- Students participated in a guided tour of the art museum. A docent taught different art forms and explained a variety of masterpieces within the museum.
- Students were encouraged to critique different art works at the museum in an open forum.

- Students were actively engaged in creating their own mosaic masterpieces.
- January 6, 2010 - Miami Art Museum - Field Trip
Students were introduced to various art forms and techniques.
- March 26, 2010 - Naples Art Museum - Field Trip
- Students toured the museum and viewed a variety of art forms.
 - Students were able to view the Chihuly exhibit and hear about blown glass as an art form.
- May 21, 2010 - Ceramic League of Miami - Field Trip
- Students created an original piece of art on a ceramic tile.

Performing Arts

December 18, 2009 - G. Holmes Braddock Senior High School - Field Trip

- Students attended a Holiday Show performed by local senior high school students.
- Students engaged in a question and answer session with the performers.

April 30, 2010 - Actor's Playhouse - Field Trip

- Students viewed a performance of "Young King Arthur."
- Students participated in workshops learning the techniques and styles of dramatic art.
- Students were instructed on how to create their own short screenplay.
- Students observed the interactions of a live storyline. After the play students had a meet and greet session with the actors, writer, and musical director of the play.

May 18-20th - "On the Radio- A Musical" – student performance at school

- Students in grades 1-5 performed a musical rendition of tunes from yesteryear to today for entire student body, parents, and community members.
- Students received information on how music encompasses our lives throughout time and how each song enables us to remember a bit of our past.
- Gifted students collaborated with the school's chorus and cheerleaders to carryout performance.

Broadcast & Telecommunications

April 16, 2010 - Clear Channel (Radio Station) – field trip

- Students toured the inner workings of a radio station, met and had a question and answer session with radio personalities.

May 6, 2010 - Will Manso, sports anchor of WPLG Channel 10.

- Students met a local television sports anchor.
- Presentation on techniques used in speaking into a camera.

Culmination of Activities for CANVAS GRANT

May 21, 2010 - In-house field trip - Fantasy Theatre

- Students participated in a sing-a-long with performers
- All Star Events - Students created their own videos, and were shown how a green screen is used in television and video productions.
- Ceramic League of Miami instructed students use of on acrylic paints, ceramics and kilns. Each student created their own original piece of art which was then fired.

B. Curriculum Content Focus

CANVAS focused on Media, Radio, Television, Dance, Music, Art & Architecture.

Broadcast & Telecommunications

Radio – The history of Radio and its advances through time. Students were instructed through reading, inquiry and research.

- Students visited Y-100, a local radio station & Clear Channel studio on April 16, 2010. While there, they heard how a disk jockey prepares for a time slot. Additionally, the students were able to meet several disc jockeys for a one on one conversation about the daily rigors of being on the air.

- Students had the opportunity to witness the world of broadcasting via the radio.

Television- Students were provided the history of the television and its advances through time.

Instruction was provided through reading, inquiry and research.

- Students met with a local News Anchor (Speaker) – In-house field trip. Students met Will Manso, a local sportscaster from WPLG Channel 10.
- Instruction focused on information being delivered accurately, quickly and without bias.

Performing Arts

Performing Arts- Students were taught the history of the performing arts, theatre and music as well as its advances through time. Students were taught through reading, inquiry and research. After learning about the performing arts;

Dance

- Students visited G. Holmes Braddock Senior High School and enjoyed watching and listening to a variety of performances/skits, from comedy to dance set to music. After the performance, the performers were able to discuss the precision and pleasure of their art form with students.
- Students were introduced to techniques through audience participation while attending a performance at both Actor’s Playhouse and Braddock Senior High. Students were also able to use these techniques while enjoying a performance by Fantasy Theatre.
- Students were able to identify form and techniques used in the art of dance while performing the musical; *On the Radio*.

Theater

- Students attended a performance of “Young King Arthur” at Actor’s Playhouse where they were given the opportunity to review the art of drama.
- Students performed a spoof on the ever popular “Rapunzel” which became “Rafunzel,” as well as, “Sleeping Beauty” which became “Slurping Beauty.”
- Students wrote original plays and preformed for other students throughout the school.
- Students received hands-on lessons from a drama professor as well as playwrights and participated in a question and answer session. Students were able to ad lib with the playwrights to create/perform an impromptu fairy tale skit.

Music

- Students heard an orchestra at G. Holmes Braddock Senior High School and were told about the different types of instruments and the families they belong to. Students then met with performers in small groups.
- Students researched and created their own musical instruments and presented these to their peers.
- Students researched a variety of musicians and created written reports, as well as PowerPoint presentations.

Visual Arts

Art- Students were taught the history of the arts and its advances through time. Students were taught through reading, inquiry and research. After learning about the arts;

- Students were able to hear about art history, from the Renaissance and to the 21st Century while attending a variety of exhibits and museums throughout our community as well as an adjacent county, such as the Lowe’s Art Museum, Deering Estates, and the Naples Art Museum.

- Students met with guest speakers: Artists invited to share and explain their craft, as well as discuss the multitude of mediums available.
- The Miami Art Museum (MAM)-introduced students to local artisans who worked with a variety of mediums and art forms, especially abstract art.
- The Ceramic League of Miami visited and guided students in creation of an original work of art on a tile.
- Students researched a variety of artists and created reports/PowerPoint presentations.

Art Workshop

- Students participated in a variety of art workshops, where they were introduced to brush strokes, pastels, mosaics, and watercolors by a professional art instructor. Art techniques were introduced by MAM, Ceramic League of Miami, Lowes Art Museum, and Actor's Playhouse.

Art Appreciation

- After introductions to the art process, students visited local sites to view important works done in all mediums.
- Students were invited to create:
 - Leaf prints
 - Silhouettes
 - Scrap book pages
 - Doodle for Google (Art Contest)
 - Murals
 - Watercolor paintings
 - Stain glass
 - Mona Lisa portraits
 - Ceramic Tiles
 - Collages
 - PowerPoint presentations

Architecture

- Students were introduced to the study of architecture by encompassing art, social studies, language arts, history, science and math.
- Students were provided a multidisciplinary curriculum, architectural terms and concepts that helped them gain appreciation of their environment and the buildings, towns, and cities that make it up.
- Students were introduced to the history of architecture, famous architects throughout history, and some of the most well-known buildings and structures throughout the world.
- Presentations on how buildings and cities are planned, designed and built. In turn, students used the skills and knowledge to create their own model town.
- Students visited Deering Estates to learn about the architectural features of some of South Florida's earliest buildings.
- Local architects, engineers, and construction managers, from our local community volunteered as guest speakers to talk to the students about what their job entails.

C. Sunshine State Standards Addressed

Language Arts

- LA.A.1.2.1 uses a table of contents, index, headings, captions, illustrations, and major words to anticipate or predict content and purpose of a reading selection
- LA.A.1.2.4 clarifies understanding by rereading, self-correction, summarizing, checking other sources, and class or group discussion
- LA.A.2.2.1 reads text and determines the main idea or essential message, identifies relevant

- LA.A.2.2.2 supporting details and facts, and arranges events in chronological order
- LA.A.2.2.2 identifies the author’s purpose in a simple text
- LA.A.2.2.4 identifies specific personal preferences relative to fiction and nonfiction reading
- LA.A.2.2.5 reads and organizes information for a variety of purposes, including making a report, conducting interviews, taking a test, and performing an authentic task
- LA.B.1.2.1 prepares for writing by recording thoughts, focusing on a central idea, grouping related ideas, and identifying the purpose for writing
- LA.B.2.2.1 writes notes, comments, and observations that reflect comprehension of content and experiences from a variety of media
- LA.B.2.2.3 writes for a variety of occasions, audiences, and purposes
- LA.B.2.2.4 uses electronic technology, including word-processing software and electronic encyclopedias, to create, revise, retrieve, and verify information
- LA.C.1.2.1 listens and responds to a variety of oral presentations, such as stories, poems, skits, songs, personal accounts, and informational speeches
- LA.C.1.2.2 identifies specific personal listening preferences regarding fiction, drama, literary nonfiction, and informational presentations
- LA.C.1.2.4 listens attentively to the speaker, including making eye contact and facing the speaker
- LA.C.1.2.5 responds to speakers by asking questions, making contributions, and paraphrasing what is said
- LA.C.3.2.3 speaks for specific occasions, audiences, and purposes, including conversations, discussions, projects, and informational or imaginative presentations
- LA.D.2.2.3 recognizes different techniques used in media messages and their purposes
- LA.D.2.2.4 selects and uses appropriate technologies to enhance efficiency and effectiveness of communication
- LA.D.2.2.5 understands that a variety of messages can be conveyed through mass media

Florida Frameworks for K-12 Gifted

Program Goal # 3 Objective # 2

Know - Identifies and locates information available in a multitude of places, including newspapers, magazines, catalogues, Internet directories, time schedules, and media, all of which include local, state, national and/or international sources

Program Goal # 4 Objective # 3

Know - Recognizes contributions of inventors and innovators in multiple fields of accomplishment

Accomplish - Advocates convincingly to diverse audiences using sophisticated techniques (oral, written, technological) appropriate to the field and audience

Program Goal # 5 Objective #1

Understand - Demonstrates a greater awareness of others through participation in programs and projects that emphasize service to others

Know - Identifies personal abilities, talents, strengths and weaknesses for certain tasks, recognizing the power to influence one’s own destiny

Know – Recognizes the essential need to respect the ideas, feelings, and abilities of others

D. Instructional Methodology Used

The intent of the CANVAS program was to incorporate innovative ways to enhance the education of the gifted by using different teaching methodology. CANVAS developed an enriching, motivating curriculum where students applied a “hands-on” approach to all aspects of the gifted program. Through this design of instruction, CANVAS promoted the individual study of the arts, thus

bringing the arts into the curriculum and the curriculum into the arts. Teachers used *CANVAS* to motivate and enlighten the student’s awareness of the arts and sciences by facilitating and utilizing the communities’ available resources. Students were given unique opportunities to use and promote the cultural diversity that Miami-Dade County has to offer. They discovered, observed, and participated by visiting art exhibits, plays, dance performances, and media presentations within the school and the community. These experiences presented students the skills necessary to succeed in life and view the world using a kaleidoscope of ideas generated from the arts.

E. Nature of the Collaboration

Students were able to visit, see and listen to individuals and places that make Miami a melting pot of culture. This cultural awareness in their own backyard has given students an opportunity to develop a sense of pride in their community. By giving them the exposure to their own community the intent was to learn more about their surroundings. It has become evident that this exposure has led to the students having a more varied and enriched vocabulary; along with the knowledge they acquired gives them the tools they need to be able to compete globally.

As we collaborated with G. Holmes Braddock Senior High, students saw first-hand how the arts play a significant role in a young person’s life. Students were enthralled with the high school students who served as role models and mentors. While speaking with these young men and women, students realized that a few were former alumni of Ethel Koger Beckham Elementary and had been part of the gifted program as well.

Additionally, the teachers - along with the collaborators from Clear Channel, WPLG, the Ceramic League of Miami, MAM, the architecture team and countless others - contributed to the common goal of increasing motivation, developing skills to resolve real life problems and increasing achievement in all academic areas. This resolve was observed by the students, teachers and collaborators alike. It was a sense of enthusiasm.

CANVAS has given students, teachers and collaborators an opportunity to learn from each other which has allowed students to become the teachers themselves. A sign of success: A third grader spots an art calendar on the wall, and says, “Oh, that’s a Van Gogh.”

Participants

Participants	Number	Participants	Number
Gifted students	143	Teachers of gifted	4
General education students	520	General education teachers	46
ESE students	75	ESE teachers	4
Administrators	2	Parents	189
Community members	18		
		Total participants	1,001

Student Population:

Gifted students participating

Grade 1	33 students	Grade 2	24 students
Grade 3	24 students	Grade 4	31 students
Grade 5	31 students		

III. Evaluation

A. Assessment of Student Performance

Students were assessed with both quantitative and qualitative methods. Students participated in pre and post tests to evaluate their prior knowledge and the knowledge acquired through the CANVAS Program. The comprehensive exam is an example of a quantitative method of evaluation which allowed both the teacher(s) and the student(s) to measure knowledge gained. It also provided a theory or method that had a concrete connection.

Students were also assessed by various qualitative methods to provide an opportunity to paint a picture of what they have learned rather than using traditional formats of assessment. For example, tools like portfolios, presentation, performances, evaluations, and tactile experiences showed evidence of the students' efforts, progress and achievements.

The assessment results were favorable and clearly show that students at all grade levels made significant learning gains in all areas assessed (refer to graphs below). Participants in the CANVAS acquired new knowledge with at least 80% of an outcome. This is an indication that the targeted goals were met. The goals and objectives selected directly correlated with the activities stated and assigned throughout CANVAS; therefore participants were able to reach the desired outcome. The CANVAS program demonstrated that students showed growth in critical thinking, creative thinking and personal growth in self- awareness, decision making, coping behaviors and tolerance. They were encouraged to use effective techniques to discover new ideas and showed growth in the use of interpretation of verbal and non-verbal communication skills.

CANVAS Pre-Post Test Results Grade One

	Music Pre	Music Post	Art Pre	Art Post	Architecture Pre	Architecture Post
Class 1 average	26%	91%	8%	88%	4%	86%
Class 2 average	21%	90%	14%	91%	10%	87%

Grade Two

	Music Pre	Music Post	Art Pre	Art Post	Architecture Pre	Architecture Post
Class 1 average	24%	97%	15%	100%	23%	81%
Class 2 average	44%	79%	27%	88%	40%	83%

Grade Three

	Music Pre	Music Post	Art Pre	Art Post	Architecture Pre	Architecture Post
Class 1 average	21%	98%	22%	98%	26%	100%

Grade Four

	Music Pre	Music Post	Art Pre	Art Post	Architecture Pre	Architecture Post
Class 1 average	41%	95%	31%	85%	45%	92%
Class 2 average	42%	91%	37%	90%	55%	96%

Grade Five

	Music Pre	Music Post	Art Pre	Art Post	Architecture Pre	Architecture Post
Average	65%	98%	23%	95%	59%	97%

B. Project Evaluation

The CANVAS program was evaluated by studying both the quantitative and qualitative forms of assessment. All students in the program were a pre and post test on each of the art forms being taught. Results of this can be seen in the graphs below. Test results demonstrate students increased their knowledge in the art forms presented. The results of the SAT for grades one and two found all gifted students scored above the 50th percentile. The 2010 Florida Comprehensive Assessment Test scores for 3rd, 4th, and 5th grade reveal that all gifted students scored a 3 or above in the Reading and Mathematics subtests. After careful evaluation of these assessments, CANVAS goals were attained.

IV. Dissemination

CANVAS successfully created a collaborative liaison between the community, visual and performing arts organizations, local businesses, and the school as well as effectively disseminated and shared information about the project. The following methods/strategies were implemented in order to share the results of the project with other groups:

- A bilingual parent workshop for parents of the gifted students delineating the project goals and objectives was conducted on September 10, 2009.
- Flyers were sent home to parents informing them of upcoming activities in accordance with the goals and objectives of CANVAS and a web page was maintained showcasing program outcomes and successes throughout the school year
- An art exhibition was held May 21, 2010, where students, teachers, and parents were able to view original student artwork imitating the style of the artist he/she chose to research. Additionally, community members including, but not limited to, our Dade business partners and program collaborators were invited to view the showcase.
- Project accomplishments were shared with the school at large via faculty meetings, district workshops for teachers of the gifted, PTA meetings and advisory committee meetings throughout the school year.

V. Budget

Item	Unit	Cost
HP 75XL Tricolor Inkjet Cartridge	4 @ \$40.99	\$163.96
HP 74XL Black Inkjet Cartridge	4 @ \$34.99	\$139.96
WAUSAU Bright White Premium Card Stock	3 packs @ \$12.99	\$38.97
HP 22 Tricolor Inkjet Cartridges	2 @ \$36.99	\$73.98
HP Premium Photo Paper -Color Laser Printers	4 packages @ \$20.99	\$83.96
HP 56 Black Ink Cartridge Quad Pack		\$81.99
FORAY Recycled Storybook Paper	2 @ \$3.24	\$6.48
Flash drives for saving student work	140 @ \$ 9.85 plus \$45shipping/handling	\$1424.00
Kodak 2XD Camcorder		\$276.00
Software: Amazing Adventures: Around the World	2 @ \$19.99	\$39.98
Software: Amazing Adventures: Caribbean Secret	2 @ \$19.99	\$39.98
Software: Are You Smarter Than a 5th Grader?	2 @ \$19.95	\$39.90
The Print Shop 23 Deluxe	4 @ \$22.49	\$89.96
Adobe Photoshop Elements 8	2 @ \$99.99	\$199.98
General admission to Actor's Playhouse		\$2256.00
Transportation	3 buses @ \$90	\$390.00
All Star Event		\$750.00
Fantasy Theater admission		\$400.00
Admission to Deering Estate	139 students @ \$5.00	\$695.00
Transportation	3 buses @ \$90 2 buses @ \$142.60	\$555.20
Transportation	3 buses @ \$130	\$390.00
Transportation	3 buses @ \$130	\$390.00
Admission to Loews Art Museum	134 students @ \$6.00	\$804.00
Transportation	4 buses @ \$142.60	\$570.40
Total		\$9,899.70

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**Orange County School District
Discovery Middle School**

Project Title: *Writing Through the Ages*

I. Project Rationale and Goals

A. Project Rationale

The *Writing Through the Ages*' gifted curriculum at Discovery Middle School offered students an innovative approach to understanding and mastering writing skills through integrating new materials and outside partnerships. Expanded strategies and activities included: digital journaling, book publishing, mentorships, photography journaling and current event magazine subscriptions for non-fiction writing reference. The program also provided new insight into the ancient civilizations of Mesopotamia, Africa, Greece and Rome. The program was combined with the order of instruction and benchmark standards for sixth grade social studies and language arts. The content not only integrated writing, but also vocabulary, geography, challenging fiction and non-fiction reading comprehension materials. Through independent study, inquiry, and problem-based learning, the curriculum placed greater emphasis on organization, research, and investigative methodologies for the gifted students.

B. Project Goals

The *Writing Through the Ages*' gifted curriculum was created to improve writing skills of Discovery Middle School's sixth grade gifted students and to inspire students to write in and out of academic settings.

II. Project Implementation

A. Project Activities

Sixth grade gifted students wrote persuasive, expository essays, after working with senior University of Central Florida (UCF) creative writing students. The UCF students mentored the gifted students once a week. The gifted students also used photography with digital cameras to take photos of different elements around the school campus to inspire their creative writing in poetry and then added these to their student portfolios.

Students engaged in an on-site archaeological dig with items that could have been from the ancient civilizations studied, particularly Greece, Rome and Africa. They participated in a Drama workshop with actors from the Orlando Repertory Theater. Students then wrote their own dramas as they were studying ancient dramas from Rome and Greece. They acted out two Greek plays, recorded them on video, and posted them on the class blog website. The gifted students also were able to participate in an online discussion forum through the class blog.

An historical character visited students in the classroom courtesy of an employee of the Orange County History Center and gifted students prepared interview questions for the African slave character. They then compiled the interviews (primary resource) into their research reports on the social studies topic of slavery in Africa and America. The gifted students also published their poetry and photographs on the class webpage. Gifted students collaborated with UCF students to

publish their book with their original writings including poetry, creative writing, technical writing and essay compositions they had worked on throughout the school year.

In reference directly to the language arts, students used their subscription to Junior *Scholastic* magazines to read non-fiction current events and complete the magazine writing and comprehension activities. Sixth grade-gifted students also read a fiction novel based on a futuristic civilization. They completed a cross-curricular unit based on the novel's theme. Sixth grade-gifted students participated in a cross - curricular Greek Day where they painted pottery, participated in a Greek Play with original costumes and backdrops. They also calculated the cost of menu food items at the "Greek Café", including taxes.

B. Curriculum Content Focus

The curriculum content focus was writing: creative writing, pre-writing, formal/informal writing, and nonfiction writing. There was also a focus on social studies content, particularly ancient civilizations.

C. Next Generation Sunshine State Standards Addressed

Language Arts

- L.A.A.2.3.5 locates, organizes, and interprets written information for a variety of purposes, including classroom research, collaborative decision making, and performing a school or real-world task
- LA.6.4.2.3 write informational/expository essays (e.g., process, description, explanation, comparison/contrast, problem/solution) that include a thesis statement, supporting details, and introductory, body, and concluding paragraphs
- LA.6.6.2.3 write an informational report that includes a focused topic, appropriate facts and relevant details, a logical sequence, a concluding statement, and list of sources used
- LA.6.6.4.2 determine and apply digital tools (e.g., word processing, multimedia authoring, web tools, graphic organizers) to publications and presentations

Note: The Florida FCAT 6 traits writing rubric was a guide followed throughout.

D. Instructional Methodology Used

The Parallel Curriculum Model was the model for the redesign of the sixth grade gifted curriculum due to its focus on, not just one curriculum such as Language Arts or Social Studies, but multiple contents and curriculums wrapped into one package. With the use of the core curriculum, curriculum of connections, curriculum of practice, and curriculum of identity, gifted students' needs addressed. The students would have typically been placed on a team with one gifted teacher per team; and three teams per grade level. To ensure the implementation of the gifted curriculum, gifted students were able to have their needs met by participating in the *Writing Through the Ages* program. All sixth grade gifted students received a differentiated curriculum. They also focused their gifted studies on writing and social studies whereas in the past it was predominately focused on math and science content areas.

The Florida *Frameworks for Gifted* were implemented throughout the curriculum. The student identified as gifted was able to critically examine the complexity of knowledge: the location, definition, and organization of a variety of fields of knowledge. Especially, when working on the cross-curricular activities between Language Arts and Social Studies. Students were able to

conduct thoughtful research/exploration and to develop and deliver a variety of authentic products/performances that demonstrate understanding in multiple fields/disciplines such as writing and social studies through the ancient civilization research report project and through the mentorship's with professionals and soon-to-be professionals in the writing career field as well as the Theatrical production career fields.

E. Nature of the Collaboration

One of our partners was The University of Central Florida creative writing department. Professor Terry Thaxton and her junior/senior creative writing students visited us twice a week to work with the gifted education students. Through this collaboration the UCF students helped the gifted students' develop writing styles and mechanics and taught them to edit their work. They also helped gather and edit work from each of the gifted education students into a class book of writings. These books were printed and distributed to each student and to each creative writing mentor, the principal, school reading coach and other gifted teachers on campus.

The Orange County History Center was also a partner with our *Writing through the Ages* curriculum by providing an in-school field trip aligned with the Social Studies curriculum. They also sent an actor to our campus who was dressed as a character from the ancient civilization of Africa, a particular time period we studied. Because we had studied Ancient Civilizations of Africa and the trading of slaves, the character was an African slave, named Estevanico.

Another collaborating partner was The Orlando Repertory Theater. They provided and helped us plan an appropriate field trip to watch a play, *The Giver*. After the play was over they hosted a formal question and answer interview time for the gifted students with the actors from the play. Students then created their own play scripts based on the information and tips given to them by the Repertory Theater members.

Participants:

Participants	Number	Participants	Number
Gifted students (6 th graders)	54	Teachers of gifted	1
ESE students	3	General education teachers	3
Administrators	2	Parents	5
Community members	12	Other participants	1
Total Participants	81		

Personnel:

Bookkeeper Debbie Saunders: monitored budget and purchase orders
 Principal Dr. Gloria Fernandez: approval and oversight of curriculum
 Teachers Eric Olson, Joanne Davis, Amanda Sheeran: Helped with organization and implementation of extra activities.
 Reading Coach Patti Schmidt: provided additional guidance and resources for curriculum and reading materials
 Tech Support person Patrick Morgan: technology assistance with Blog, website and filming
 Media Center Specialist Michelle Vallin: offered class novel suggestions based on curriculum and helped plan Literacy Circles based on fiction novels with settings from Ancient Civilizations.

III. Evaluation

A. Assessment of Student Performance

By May 2010, the intended goal was increase the average writing scores of Discovery Middle School sixth grade gifted learners to at least a 4.5 or above as measured by the FCAT writing rubric applied to the school wide writing test Discovery Writes.

- Initial writing assessment given in September 2009: results:
37% of students scored a 4.5 or higher using The Florida Writes writing rubric scores.
- Final writing assessment given April 2010 – results:
98% of students scored a 4.5 or higher using The Florida Writes writing rubric scores.

Increase percentage of: 61%

By May 2010, the intended goal was to increase the ability of sixth grade gifted learners at Discovery Middle School to locate, organize, and interpret written information for a variety of purposes, including classroom research, collaborative decision-making and performing a school or real world task as measured by the Edusoft benchmark testing (LAA 2.3.5).

- Fall assessment September 2009 results on LA benchmark 2.3.5:
69% of students needed improvement and 31% were considered on target .
- Spring assessment given April 2010 results on the LA benchmark 2.3.5:
9% of students needed improvement and 81% were considered on target.

Increase percentage of students on target: 50%

B. Project Evaluation

Both the objectives and the goals were met for the curriculum implementation. The experience was extremely positive for all parties involved. The students gained pride in their writing abilities and in their reading comprehension with non-fiction materials. This was an easy implementation once all planning was complete prior to suggested activities. The parents and volunteers from UCF were extremely grateful and appreciative of their encouraged involvement in the curriculum and have expressed interest to participate in the same program next year if possible. There will be no continued interest in funding this curriculum due to the changing state requirements. It was extremely beneficial to the students it affected this year and to myself as an educator. I feel I have re-educated myself in teaching with a broader spectrum and more creativity than previous years.

IV. Dissemination

The student blog and class website has been up for the entire year with information, activities, and samples of student work. The published student books with writings and pictures from throughout the year was printed and distributed in June to all participants who helped with the curriculum implementation. Student podcasts can also be heard on the website. The teacher is scheduled to present at the county expo for gifted teachers about the curriculum. The county newsletter, *Orange Peel*, that is distributed to all Orange County Public School teachers, published an article in the April

2010 edition still on the county website with information and updates on the curriculum and activities.

V. Budget

Item	Cost
Digital camera with recording capabilities	\$89.99
Photo printing paper	\$18.69
Ink cartridges for printing pictures	\$40.00
Class set of novels (30 x \$6.00)	\$180.00
Subscriptions to educational magazine for current events (50 x \$8.25)	\$412.50
Blank DVDs	\$20.00
Archeological dig materials	\$100.00
Dues/fees	\$45.00
Substitute fees	\$270.00
Teacher guides for curriculum materials	\$100.00
Guest speaker – Orange County History Center	\$150.00
Publishing book service	\$2,500.00
Transportation (buses to theatre)	\$200.00
Admission tickets to play	\$390.00
Teacher planning	\$2,181.47
Total	\$6,697.65

VI. Contact Person

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**Orange County School District
East Lake Elementary**

Project Title: *Disease Detectives*

I. Project Rationale and Goals

A. Project Rationale

There is a nationwide need for students to pursue secondary education in science, technology, engineering, and math (STEM). Research has shown that female students in particular do not enter these fields with the same regularity as their male counterparts. While progress has been made in many STEM fields, women remain far behind in critical areas, including computer science. High school girls represent only 17 percent of Computer Science Advanced Placement (AP) test takers, according to National Science Foundation/Division of Science Resources Statistics and data from the Department of Education/National Center for Education.

The Integrated Postsecondary Education Data System Completions Survey showed that college-educated women earn only 27 percent of the bachelor's degrees given in mathematics and computer science. Results from the 2008-2009 district-based Edusoft pre-testing in science dictate a clear need to develop the skills associated with Strands N and L of the Next Generation Florida Sunshine State Science Standards, despite the recent addition of the forensic science program. Strand N focuses on the nature of science and scientific thinking. Strand L focuses on life sciences.

Capitalizing on the nationwide interest in epidemiology, spawned by television programs like *House*, the gifted program at East Lake Elementary proposes to focus the gifted life sciences unit on epidemiology as a means of teaching standards-based science concepts. Epidemiology is the branch of science that deals with the cause, distribution, and control of disease in populations. Simply stated, epidemiology is the ecology of disease. The real world application of epidemiology, coupled with the extensive amount of scientific concepts covered within its evidentiary procedures, allows for cross-curricular integration in science, math, and language arts. The new epidemiology unit will focus on using scientific inquiry and investigation to develop an interest in STEM careers, specifically biomedical engineering, environmental engineering, and agricultural engineering, while meeting individual needs as assessed by the individual gifted student Educational Plans. Students will participate in this program during the normal school day.

B. Project Goals

GOAL: To promote inquiry in science among gifted learners in Grades 3-5 at East Lake Elementary School through creating an epidemiology unit.
OBJECTIVE 1: CURRICULUM DEVELOPMENT
Objective 1.1: By June 2010, develop a rigorous and challenging epidemiology unit to advance science inquiry in gifted elementary school students as measured by Florida's Frameworks for K-12 Gifted Learners Checklist for Challenge and Rigor.
Objective 1.2: By June 2010, compact the standard science curriculum for gifted students in order to implement <i>Disease Detectives</i> and ensure that it correlates with the Gifted Frameworks #1, 3, 4, and 6 as measured by <i>Florida's Frameworks for K-12</i>

<i>Gifted Learners Checklist for Challenge and Rigor.</i>
OBJECTIVE 2: GIFTED TEACHER TRAINING
Objective 2.1: By June 2010, improve gifted teacher content knowledge in epidemiology science to support implementation of the <i>Disease Detectives</i> collaborative curriculum unit as measured by successful course and other professional development completion records.
Objective 2.2: By June 2010, improve the pedagogical skills of the gifted teacher related to science inquiry as measured by the student achievement data of East Lake Elementary school's gifted learners on the Edusoft science pre- and post tests.
OBJECTIVE 2: ADVANCEMENT OF GIFTED STUDENTS
Objective 3.1: By June 2010, advance the science inquiry skills, specifically relating to Strands L and N, of East Lake's 35 gifted students as assessed by the district's Edusoft science pre/post test.
Objective 3.2: By June 2010, increase the epidemiologic knowledge and skills of East Lake Elementary School's 35 gifted learners as demonstrated during their planning and creation of the <i>Disease Detectives</i> graphic novel.
Objective 3.3: By June 2010, develop the interest of 35 East Lake Elementary School gifted students in STEM careers as assessed by a student attitude survey.

II. Project Implementation

A. Project Activities

Students who participated in the *Disease Detectives* program took part in a challenging problem-based curriculum unit. Beginning the Life Sciences unit, each student was given a science pre-test consisting of grade level specific concepts to be covered in math and science throughout that unit. Data was kept to document growth on end of the unit post test. The individual topics within the unit of study also began with a topic pretest. Each topic was compacted into seven lessons, including two hands-on environmental or bio-medical engineering investigations.

In addition, culminating each topic of study a simulation of a disease disaster that directly reinforced each individual topic within the unit was carried out. One example of such a simulation occurred after studying human body systems. Students were asked to find the epicenter of an E.Coli outbreak at a local fair based on patient testimonials and faux medical records. Students synthesized what they had learned regarding the effects of the disease upon body systems. After students completed their investigation into the root, or cause, of the simulated disease disaster, they recorded conclusions into their bio-medical laboratory notebooks.

Throughout each topic of study, students had the opportunity to interact with a professional in the engineering or medical field who had direct expertise using the technique discussed in that topics simulated disease disaster. One such experience was interaction with the head of the Orange County Health Department's Epidemiology Unit, Donna Walsh. Students took part in seminar style instruction on local disease outbreaks among children and adolescents.

Finally, in closure of the life sciences unit, students attended a field trip to the Orlando Science Center where they took part in simulation-type activities. Students synthesized information regarding vital signs while working with a patient simulator. Students used a scanning electron microscope (SEM) to identify the sources of bacteria and infectious agents in the school and home environments.

As assessment for the life sciences unit, students created a graphic novel that demonstrated mastery of the life sciences standards, as well as concepts relating directly to epidemiology. Each student researched a different infectious disease and created a realistic, yet fictional, graphic novel that traced the lifecycle of the disease outbreak from inception to resolution. The students' novels were published.

The table below illustrates new knowledge and skills that students in the gifted program were expected to acquire.

Newly Acquired Skills
Chlorine testing
Reading comprehension- nonfiction
PH testing
Using Research Skills
Phosphate Testing
Expository Writing
Comparative Analysis
Chromatography
Critical Thinking
Microscopy
Deductive Reasoning
Food Testing
Interviewing
Graphic Design
Observation Skills
Problem Solving
Creating Lab Reports
Creating Data Tables
Graphing
Algebraic Thinking
Predicting
Inferring

B. Curriculum Content Focus

The *Disease Detectives* unit of study for gifted students at East Lake Elementary School offered a unique approach to challenging students with exceptional needs. Although the unit taught primarily science, the content integrated rich vocabulary, writing, mathematics, and challenging

reading. An inquiry approach placed a greater emphasis on the logical thinking processes by which knowledge is acquired and less emphasis on the rote learning of information.

The *Disease Detectives* unit of study was developed around the Parallel Curriculum Model because it focuses on ascending intellectual demand, which aligned with the programs objective of advancing gifted students' development in science inquiry.

Through the developed *Disease Detectives* program, gifted students challenged themselves through planned epidemiologic investigations, aligned with the state standards, moving students beyond the text toward exploration and discovery.

The program differed from the basic science curriculum in the general education classroom because students challenged themselves through exploration and discovery. Students experienced the Life Sciences with a depth and breadth uncommon in a regular education classroom.

Building on the concept of inquiry, the use of epidemiology facilitated the science standards required. Epidemiology is ideal for gifted learners because it provides a multidisciplinary approach to science including: biology, chemistry, anatomy, genetics, physics, engineering, and math. The *Disease Detectives* unit of study created simulations of disease outbreak, that that not only reviewed the materials taught in the life sciences unit, but also required students to solve complex problems that require logical reasoning and involves numerical data to trace the source of the incident.

Unit of Study	Epidemiology Topic
Classifying Organisms	Focalization / Hair Analysis/ Adaptations
Cells to Systems	Blood Typing / Microscopy / Saliva
Human Body	DNA / Dental Impressions / Facial Reconstruction
Plants	Chromatography / Plant Identification / Trace Evidence / Leaf and Soil Analysis
Ecosystem Interactions	Entomology- Insects/ Zoology – Animal Hair and Blood/ Organic Analysis
Ecosystem Changes	Habitats/Soil Analysis/Water Analysis/ Environment Analysis

C. Next Generation Sunshine State Standards Addressed

Science

- SC.3.L.17.2 recognize that plants use energy from the Sun, air, and water to make their own food
- SC.3.N.1.1 raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations
- SC.3.N.1.4 recognize the importance of communication among scientists
- SC.3.N.1.5 recognize that scientists question, discuss, and check each others' evidence and explanations
- SC.4.N.3.1 explain that models can be three dimensional, two dimensional, an explanation in your mind, or a computer model
- SC.4.N.1.1 raise questions about the natural world, use appropriate reference materials that support understanding to obtain information (identifying the source), conduct both individual and team investigations through free exploration and systematic

- investigations, and generate appropriate explanations based on those explorations
- SC.4.N.1.2 compare the observations made by different groups using multiple tools and seek reasons to explain the differences across groups
- SC.4.N.1.7 recognize and explain that scientists base their explanations on evidence
- SC.4.L.16.2 explain that although characteristics of plants and animals are inherited, some characteristics can be affected by the environment
- SC.4.L.16.3 recognize that animal behaviors may be shaped by heredity and learning
- SC.4.L.17.2 explain that animals, including humans, cannot make their own food and that when animals eat plants or other animals, the energy stored in the food source is passed to them
- SC.4.L.17.3 trace the flow of energy from the Sun as it is transferred along the food chain through the producers to the consumers
- SC.4.L.17.4 recognize ways plants and animals, including humans, can impact the environment
- SC.5.L.14.1 identify the organs in the human body and describe their functions, including the skin, brain, heart, lungs, stomach, liver, intestines, pancreas, muscles and skeleton, reproductive organs, kidneys, bladder, and sensory organs
- SC.5.L.14.2 compare and contrast the function of organs and other physical structures of plants and animals, including humans, for example: some animals have skeletons for support -some with internal skeletons others with exoskeletons - while some plants have stems for support
- SC.5.L.15.1 describe how, when the environment changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations
- SC.5.L.17.1 compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics
- SC.5.N.1.1 define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as: systematic observations, experiments requiring the identification of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions
- SC.5.N.1.3 recognize and explain the need for repeated experimental trials

Florida Frameworks for K-12 Gifted Learners that directly relate to this project include:

- Outcome 1: By graduation, the student identified as gifted will be able to critically examine the complexity of knowledge: the location, definition, and organization of a variety of fields of knowledge.
- Outcome 3: By graduation, the student identified as gifted will be able to conduct thoughtful research/exploration in multiple fields.
- Outcome 4: By graduation, the student identified as gifted will be able to think creatively and critically to identify and solve real-world problems.
- Outcome 6: By graduation, the student identified as gifted will be able to set and achieve personal, academic, and career goals

D. Instructional Methodology Used

Redesign of Instruction:

- Compacting of curriculum to include epidemiology

- Authentic epidemiology experiences with the Orlando Science Center
- Creation of a graphic novel that demonstrates understanding of epidemiologic concepts

Students who are gifted have learning needs that go beyond what is traditionally offered in the general education classroom. The nature of their abilities requires differentiated learning experiences and opportunities for them to maximize their potential. In the *Disease Detectives* unit of study, this was accomplished by:

- Pursuing the topic of epidemiology in greater depth that included a greater level of cognitive challenge in scientific inquiry
- Completing a challenging array of authentic and complex academic tasks that required doing real world work, through epidemiologic and engineering investigations
- Advancing the curriculum at a faster pace through compacting
- Developing a sense of where their abilities may have the potential to lead them in the future through a variety of career in studies in STEM (Science, technology, engineering, and mathematics fields)

INSTRUCTIONAL STRATEGIES THAT REFLECT CURRICULUM DESIGN MODIFICATIONS	
Authentic tasks	Staged epidemiology investigations that include the use of: soil, water, Ph, acidity, phosphate, chromatography, and toxicology analysis
Authentic environments	Orlando Science Center
Multidisciplinary approaches	<p>Language Arts- Technical writing in the form of: epidemiology reports; toxicology and water sample analysis reports; utilizing research methods; non-fiction reading comprehension, and a graphic novel</p> <p>Math- Creating data tables and graphs to explain science lab results; data collection; creating scale maps; using tools that measure length; mass, and volume; basic algebraic thinking</p> <p>Science Epidemiology Skills, STEM career interest development; diversity in science careers highlighted, Engineering Design Process</p>
Use of Technology	Podcasting, Scanning Electron Microscope, video editing software, recording equipment, audio recording equipment, digital cameras, EcoNightmare software
Process skills	Observe, classify, estimate, measure, predict, infer, make and use models, create operational definitions, interpret, and communicate
Student Reflection opportunities	Science Notebooks, Peer review of assignment
Products	Epidemiology-based science fair project, student epidemiology laboratory journal, graphic novel

E. Nature of the Collaboration

The **Orlando Science Center (OSC)** collaborated with the gifted teacher at East Lake to develop a life science training and experience for each of the grades 3-5. Students visited the Orlando Science Center to participate in simulated epidemiologic investigations and related activities. During the visit students used new evidentiary techniques previously taught by the gifted teacher to get one step closer to identifying the cause for the epidemiologic outbreak. Students logged their evidence and key terms in the bio-medical journal. While at the Orlando Science Center students take the evidence from East Lake and analyze it under the Scanning Electron Microscope (SEM). The images from the SEM are then published through the interactive website that allows students to further analyze data.

The **INSPIRE Program for P-12 Engineering Education, Purdue University.** Dr. Strobel provided lessons relating to engineering, and professional development opportunities for the gifted teacher.

The **Technology Chair**, Mr. Glarsnell Jean-Charles, at East Lake Elementary School collaborated with the gifted teacher, media specialist, and gifted students to record students' demonstrations of how to perform epidemiologic techniques such as pH testing and publish them at the East Lake's school website. Finally, East Lake's website now has a page dedicated to the curriculum of the *Disease Detectives* program where resources on science, inquiry, epidemiology, engineering and the lessons created through this grant will be found for use by parents, students, and other educators

From the **Orange County Department of Health**, Danielle Knight spoke to the gifted students about disease prevention and provide age-appropriate literature.

From the **Florida Department of Health**, Donna Walsh presented a PowerPoint on epidemiology to the gifted students, and be available to answer questions.

From the Outreach Office, **UCF College of Engineering and Computer Science**, Jacqueline Sullivan assisted with labs and special projects, discuss and field questions regarding environmental engineering, and promote STEM careers with gifted students.

Participants:

Participants	Number	Participants	Number
Gifted students	35	Teachers of gifted	1
Community members	6	General education teachers	8
Parents	10	Others	4
Total Participants	64		

Personnel:

Student participation

East Lake's gifted population is comprised of 53 gifted students, grades 1-5. In order to cultivate academic excellence, gifted students at East Lake Elementary School are homogeneously grouped for one academic subject per day. This method of grouping gifted learners is unique among elementary schools in Orange County, where the majority of gifted learners participate in a once

weekly enrichment program. Gifted students at each grade level attend gifted science classes for 45 minutes per day. The table below illustrates the number of gifted students who participated in the *Disease Detectives* unit of study.

Grade Level	Number of Gifted Participants
3	7
4	14
5	14

Personnel

Fund Manager – Marc Rummler, Principal, East Lake Elementary School, served as project administrator and oversaw the expenditure of grant funds. He provided the staff to handle payroll and purchasing requirements and ensure reporting was completed on time.

Project Manager – Mariel Milano, Gifted Teacher, East Lake Elementary School, managed the implementation of the project, serving as the liaison to project partners, held meetings to fully develop the curriculum, engaged gifted students in project planning and implementation, maintained records, communicated with other gifted teachers about the project, attended project training, engaged in scholarly dialogue and discussions with university professors in the field, and assessed and recorded progress toward project goals and objectives. The project manager prepared the report and shared the project with other gifted teachers through learning community and district meetings.

OCPS Instructional Support Teacher, K-12 Gifted – Martha Kesler, OCPS Gifted Resource Teacher, supported the gifted teacher/project manager in implementation aligned with the Sunshine State Standards and Florida’s Frameworks for K-12 Gifted Learners.

OCPS Instructional Support Teacher, Elementary Science –Joan Walker, shared vast available resources with the East Lake Elementary gifted teacher/project manager related to best practices in teaching elementary science.

Orlando Science Center Director of Educational Outreach, Kellen Nixon, provided staff to work with the East Lake Elementary gifted teacher/project manager in providing hands on, real world experiences for gifted students through engaging curriculum and simulated learning experiences at the museum.

Technology Consultant – Glarsnell Jean-Charles technology Coordinator, East Lake Elementary School, provided media resources in support of the project.

III. Evaluation

A. Assessment of Student Performance

Students were assessed using the EduSoft pre, mid, and post testing in science provided by Orange County Public Schools. Students in grade 5 were also assessed based on their performance on the 5th grade FCAT Science. The tables below illustrate the gains made by students.

- **Edusoft Benchmark Testing Data**
Gifted students were given a life science pre, mid, and post test that focused on the life science benchmarks for their grade level. The data for each grade level is listed below illustrates growth from the beginning pre-test to the ending post-test. The test is worth 100 points.

Grade Level	Average Increase in Knowledge
3	31%
4	43%
5	52%

- 5th grade FCAT Science Data

Percentage of Gifted Students Scoring at Each Level of Proficiency			
	2008	2009	2010
Number of Gifted 5 th Grade Students	19	12	14
Level 2	0%	4%	0%
Level 3	11%	4%	28%
Level 4	50%	50%	28%
Level 5	39%	42%	43%

The percentage of students achieving a level 5% on the FCAT Science increased 1%, while the total number of students attaining proficiency reached 100%.

Comparison of Achievement Levels on the FCAT Science							
Area	# of Students	Mean Scale Score	% of Students in Each Achievement Level				
			1	2	3	4	5
State	196,011	318	19	32	35	11	4
School	133	332	14	25	44	9	8
Gifted Class	14	409	0	0	28	28	43

The students participating in the *Disease Detectives* unit of study had a 100% proficiency rate as assessed by the FCAT Science. When compared with the school data at East Lake Elementary, they had a 39% higher proficiency rate than general education students.

Mean Points Earned in Each Category					
Area	% at or above proficient	Physical/ Chemical (/14)	Earth/ Space (/10)	Life/ Environmental (/13)	Scientific Thinking (/14)
State	49	9	7	8	9
School	61	10	8	9	9
Gifted class	100	12	9	12	13

The gifted students participating in the *Disease Detectives* unit of study scored higher in life science and scientific thinking than in the previous year and higher in the those categories than in the two remaining. In both life and scientific thinking students participating in the *Disease Detectives* unit of study scored an average of 92%, with no other significant changes to the curriculum in the past year.

B. Project Evaluation

<p>Objective 1: Curriculum Development</p> <p><u>Objective 1.1:</u> By June 2010, develop rigorous and challenging epidemiology-based curriculum unit to advance science inquiry in gifted elementary school students as measured by <i>Florida's Frameworks for K-12 Gifted Learners'</i> Checklist for Challenge and Rigor.</p> <p><u>Objective 1.2:</u> By June 2010, compact the standard science curriculum for gifted students in order to implement the <i>Disease Detectives</i> unit and ensure that it correlates with the Gifted Frameworks #1, 3, 4, and 6 as measured by <i>Florida's Frameworks for K-12 Gifted Learners'</i> Checklist for Challenge and Rigor.</p>		
What will be measured	Instrument	When
1. Developed epidemiology curriculum	Checklist for Challenge and Rigor	July 2009
2. Correlation of compacted curriculum to the gifted <i>Frameworks</i> .	Checklist for Challenge and Rigor	August 2009
<p>Objective 2: Gifted Teacher Training</p> <p><u>Objective 2.1:</u> By June 2010, improve gifted teacher <u>content knowledge</u> in forensic science to support implementation of the <i>Disease Detectives</i> collaborative curriculum as measured by successful course and other professional development completion records.</p> <p><u>Objective 2.2:</u> By June 2009, improve the <u>pedagogical skills</u> of the gifted teacher related to science inquiry as measured by the student achievement data of East Lake Elementary school's gifted learners on the Edusoft science pre- and post tests.</p>		
What will be measured	Instrument	When
1. Teacher content knowledge about epidemiology	Documentation of completion of professional development	August 2009
2. New teacher pedagogical knowledge relating to science inquiry, gifted pedagogical and instructional strategies that support Florida's Framework for K-12 Gifted Learners Outcomes 1, 3, 4, and 6	Success measured by their gifted students' achievement on the Edusoft science pre/post tests.	August 2009– May 2010
<p>Objective 3: Advancement of Gifted Students</p> <p><u>Objective 3.1:</u> By June 2010, advance the science inquiry skills of East Lake's 35 gifted students as assessed by the district's Edusoft science pre/post test.</p> <p><u>Objective 3.2:</u> By June 2010, increase the epidemiologic knowledge and skills of East Lake Elementary School's 35 gifted learners as demonstrated during their planning and creation of the <i>Disease Detectives</i> graphic novel.</p> <p><u>Objective 3.3:</u> By June 2010, develop the interest of 50 East Lake Elementary School gifted students in STEM careers as assessed by a student attitude survey.</p>		
What will be measured	Instrument	When
1. Science Inquiry Skills	Pre- and post-testing	August 2009/ May 2010
2. Knowledge of epidemiology concepts and skills	<i>Disease Detectives</i> graphic novel	May 2010
3. Interest in STEM career	STEM interest survey	May 2010

IV. Dissemination

Students disseminated the results of their inquiry investigations through peer-to-peer evaluations, in-class presentations, and science laboratory journals. They disseminated their findings to the broader general student body through bulletin boards, updates on web-based podcasts, articles in the *East Lake Gifted Gazette*, articles in the *East Lake Ledger* on East Lake's school website www.east.ocps.net.

In order to disseminate the results of the unit beyond the walls of East Lake, Ms. Milano worked with the technology coordinator to create a subpage on the school main web site which will feature the epidemiology resources and archives of the unit's graphic novels.

Culminating the grant period, the project director created a summative report outlining a summary of the project and evaluation findings. This report will be shared at the Orange County Elementary Gifted Teachers Professional Development to encourage other teachers to use resources developed by the grant. This report will summarize the findings and publicize accomplishments of the program which will be submitted to the *Orlando Sentinel*, *East Orlando Sun*, the *UCF Future*, and the *Orange Peal*. The curriculum will be presented at the National Association of Gifted Children Conference.

V. Budget

Items	Cost
Teacher curriculum	\$907.19
Orlando Science Center	\$1,000.00
Transportation (field trip)	\$180.00
Professional development	\$1,305.00
Epidemiology curriculum materials	\$3,753.81
Total	\$7,146

VI. Contact Person

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Pinellas County School District

Title: *Ancient Civilizations, Virtual Investigation: A 21st Century Collaboration*

I. Project Rationale and Goals

A. Project Rationale

How do you develop a high quality, rigorous, and challenging integrated curriculum designed to meet the needs of adolescent gifted students in a full-time gifted middle school setting? How do you train and support three new sixth grade teaching teams so that this goal can be accomplished? This was the challenge to be met when the Pinellas County School Board approved the request for three new school-within-a-school full-time gifted magnets at Dunedin Highland Middle School, Morgan Fitzgerald Middle School, and Thurgood Marshall Fundamental Middle School. Knowing that the doors would open in August 2009 and expectations would be high, there was much to be done to turn plans into reality.

Through *Ancient Civilizations, Virtual Investigations: A 21st Century Collaboration*, the eighteen teachers and the inaugural class of sixth graders in the three new Pinellas County Middle School Centers for Gifted Studies used current technologies to engage in rigorous, joint intellectual effort. Multi-school student teams collaborated virtually to develop greater content knowledge and intellectual skills as they engaged in problem-solving and critical and creative thinking while studying ancient civilizations. Led by Dr. Joyce Van Tassel-Baska, teacher teams worked together to design challenging, integrated curriculum incorporating National Association for Gifted Children standards and the *Florida Frameworks*. They also met virtually for collegial discourse, ongoing analysis of student impacts, and curriculum modification.

Ancient Civilizations, Virtual Investigations: A 21st Century Collaboration provided a guiding structure for moving forward the critical components of the innovative redesign of curriculum for the three new Middle School Centers for Gifted Studies.

B. Project Goals

The project was designed to meet two goals, the redesign of instruction and the increase in advanced academic performance as a result of the redesign. The first aim was to provide professional development and collaborative practice of the interdisciplinary teams from the three Centers for Gifted Studies in order for them to design a curriculum that was integrated with the concept of change and had interdisciplinary connections to ancient civilizations. It was imperative to provide a plan for on-going professional development and collaboration since the majority of the teachers at the Centers were not yet gifted endorsed.

The second goal focused on increasing advanced academic performance of the students in social studies and academic writing. The students would be the first group in the district to pilot the Next Generation Sunshine State Standards for sixth grade social studies. The content focus for these standards is ancient civilizations. The goal was to increase advanced academic performance and content knowledge of ancient civilizations and academic writing through an integrated curriculum approach. In addition, it was important that the students have the opportunity to collaborate among themselves at each school site as well as with the students at the other Centers for Gifted Studies.

II. Project Implementation

A. Project Activities

Professional Development – Dr. VanTassel-Baska

Dr. VanTassel-Baska delivered a full day of professional development on February 16, 2010. The topic, “Effective Instructional Models to Scaffold Learning,” focused on teaching and learning models to support teachers in the development of their integrated curriculum. The session built on prior knowledge gained from Dr. VanTassel-Baska’s visit to the district in June 2008. The session was attended by 17 of the 18 sixth grade teachers, the technical support co-leaders, one principal and the district’s gifted supervisor. Each teacher received a copy of *Curriculum Planning and Instructional Design for Gifted Learners* (VanTassel-Baska) for reference in planning curriculum.

Virtual Professional Learning Community (PLC)

Project technical support co-leaders coordinated on-going communication between the teams at the three sites using the Moodle discussion platform from November 2009 to June 2010. Topics included: student work, lesson plan reflections, National History Day planning, the Renzulli Learning program, grant project obligations and updates, and planning the culminating student project. Teacher lesson plans were submitted to the Moodle site so they could be shared by the teams. Moodle was also used to post resources for teachers.

All teachers were provided a web camera to use with Skype. Skype would enable each teacher to have visual with the person to whom they were collaborating. Primarily, this technology was used within the school via teacher to teacher instead of between schools as initially envisioned. This was partly due to the school schedules. Schools were all on different starting times, different planning times and different pre/post school times.

All students and teachers had access to the Renzulli Learning program. Teachers from two schools, Dunedin and Thurgood Marshall, participated in training after school with the technical support co-leaders. Using Renzulli Learning, the teachers produced a total of 86 assignments. (Dunedin -21; Morgan Fitzgerald - 47; Thurgood Marshall- 18)

Student Activities

Pre/post Assessments

Two pre-post activities were administered to the students. The first, “ABC’s of the Ancient World”, was designed to determine learning growth in the ancient civilizations through the use of content fluency. The expectation was that students would demonstrate gained knowledge by identifying an increased number of terms specific to ancient civilizations

The second activity combined demonstration of content knowledge and academic writing. Students were asked to write a new chapter for their social studies text, *History Alive!* The chapter was to describe an imaginary ancient civilization. This writing assignment required students to write in the role of a historian/text book author. The expectation was that students would demonstrate gained knowledge of the characteristics and notable features of a civilization.

Renzulli Learning

Students used Renzulli Learning throughout the year. The students from all three schools registered with 97% completing their learning profile. A total of 11,525 sites were visited by the 289 students. The students logged in a total of 4,882 times during the school year.

Culminating Activity

The culminating activity was a four week project that provided an opportunity for the students from the three school sites to interact as they “discovered” each other’s ancient civilization. The project was planned collaboratively by the social studies and language arts teachers, school team leaders, technical support co-leaders and the gifted supervisor. The components of the project were completed within the different content classes to reinforce that the curriculum and project had an interdisciplinary approach. Students worked individually, in class groups and then as a whole grade to create one civilization and a collection of artifacts. These artifacts were then traded for another school to examine. Students at the receiving school drew conclusions about the civilization and then communicated with the originators to determine the accuracy of their conclusions.

Week One: Culture Development

- In the social studies class students did a pre-activity exercise by examining a bag of artifacts (odd/ends) and completing a questioning exercise, “20 Questions”. Types of questions were reviewed (Frameworks Goal 2).
- Students then worked together in whole class groups to develop a single culture. Each class contributed by describing one of the seven major characteristics of civilization: stable food supply, social structure, government, religion, the arts, technology, and writing. The culture was shared with all classes.

Weeks Two and Three: Artifact Development

- Students described “A Day in the Life” in their culture in written format such as a journal entry in the language arts class.
- In the social studies class, students learned about artifacts and then each student created an individual artifact. Each school needed to determine which of the artifacts would become part of the final cultural exchange. In language arts, each student wrote a rationale as to why their artifact should be included. Classes then conducted a gallery walk so that students could evaluate all artifacts and rationales and make a final decision on which thirty artifacts would be selected.
- During the independent study classes, each student took a virtual field trip on Renzulli Learning, using the Curriculum Connections, and completed a self- assessment of the site.
- In science class, students discussed the effects of erosion on artifacts.

Weeks Four and Five: Exchange Week

- Teachers arranged the exchange of artifacts. At the receiving school, teachers buried the artifacts in large plastic bins filled with builder’s sand so that students could simulate a real dig.
- Receiving school students analyzed artifacts using questioning techniques. Teachers used various options to facilitate communication between students who created the artifacts and those who analyzed them, such as Flip video.
- As a follow up, students selected a way to share their findings such as a press release.

B. Curriculum Content Focus

The curriculum focus for this project was through social studies and language arts. Prior to the project, these subjects were not part of the Pinellas middle school gifted curriculum. In planning for the new gifted magnets, the decision was made to use the Next Generation Standards for social studies and begin teaching ancient civilizations, which will not be implemented statewide until 2012. The language arts focus was on academic writing.

C. Sunshine State Standards Addressed

Social Studies

Note: Because this project involved the new standards to be implemented in 2012, they were all included SS.6.C.1.1 through SS.6.W.4.12 – Develop themes and connections across historical events and cultures. However, those most pertinent to the project activities were:

- SS.6.W.1.1 use time lines to identify chronological order of historical events
- SS.6.W.1.2 identify terms (decade, century, epoch, era, millennium, BC/BCE, AD/CE) and designations of time periods
- SS.6.W.1.3 interpret primary and secondary sources
- SS.6.W.1.4 describe the methods of historical inquiry and how history relates to other social sciences
- SS.6.W.1.5 describe the roles of historians and recognize varying historical interpretations (historiography)
- SS6.W.2.3 identify the characteristics of civilization

Language Arts

Writing Standard 1: LA.B.1 uses writing processes effectively

- LA.B.1.3.2 drafts and revises writing that: is focused, purposeful, and reflects insight into the writing situation; conveys a sense of completeness and wholeness with adherence to the main idea; has an organizational pattern that provide for a logical progression of ideas; has support that is substantial, specific, relevant, concrete, and/or illustrative; demonstrates a commitment to and an involvement with the subject; has clarity in presentation of ideas; uses creative writing strategies appropriate to the purpose of the paper; demonstrates a command of language (word choice) with freshness of expression; has varied sentence structure and sentences that are complete except when fragments are used purposefully; and has few, if any, convention errors in mechanics, usage, punctuation
- LA.B.1.3.3 produces final documents that have been edited for: correct spelling; correct punctuation, including commas, colons, and semicolons; correct capitalization; effective sentence structure; correct common usage, including subject/verb agreement, common noun/pronoun agreement, common possessive forms, and with a variety of sentence structure, including parallel structure, and correct formatting

The following *Florida Frameworks* were implemented:

Goal 1: will be able to critically examine the complexity of knowledge: the location, definition, and organization of a variety of fields of knowledge

Objective 1: locate, define, and organize a field of study as it relates to the broad spectrum of knowledge

Objective 2: identify and illustrate basic principles and the foundational concepts that are central to understanding the essence of a field of study

Objective 3: identify and apply investigative methodologies that are followed in a selected field of knowledge

Goal 2: will be able to create, adapt, and assess multifaceted questions in a variety of fields/disciplines.

Objective 1: identify significant questions within and across disciplines

Objective 2: generate significant questions within and across disciplines

Objective 3: evaluate and refine significant questions within and across disciplines

Goal 3: will be able to conduct thoughtful research/exploration in multiple fields.
 Objective 2: use and manipulate information sources

Goal 7: will be able to develop and deliver a variety of authentic products/performances that demonstrate understanding in multiple fields/disciplines.
 Objective 1: develop products that communicate expertise in multiple fields and disciplines to a variety of authentic audiences

D. Instructional Methodology Used

The project addressed previously identified gaps, weaknesses and needs of gifted students through:

1. innovative design of integrated curriculum, incorporating Florida’s New Generation Sunshine State Standards in Social Studies, to begin in 2012, current Sunshine State Standards in Language Arts, Florida’s Frameworks for K-12 Gifted Students, and aligned with the Integrated Curriculum Model
2. change in pedagogy from traditional, basal/text based to authentic, engaging inquiry based instruction
3. application of new instructional models, and
4. use of current collaborative technologies to support student development of problem solving, critical and creative thinking, research and literary skills, and social studies/humanities content knowledge for advanced levels of achievement.

E. Nature of the Collaboration

Collaboration through Virtual Professional Learning Community (PLC)

Project technical support co-leaders coordinated on-going communication between the teams at the three sites using the Moodle discussion platform. Topics included discussion of student work, collegial reflection and the sharing of best practices.

Technical Support Co-Leaders	Sally Baynard	Barbe O’Steen	
Teachers/Subjects	Dunedin Highland	Morgan Fitzgerald	Thurgood Marshall
AdvAca -Literature	Susan Wischweh **	Lisa Micalizzi	Sheila Stewart **
Social Studies	Robyn Angelo	Meagan Studebaker**	Keri Giordano
Language Arts	Kathleen Earle	Della Schuler	Susan Houser-Murphy
Mathematics	Judith Deeley	Lisa Sutton	Jean Sterner
Science	Vickie Caruana	Lisa Valenti	Sara Deperro
Independent Study	Kathy Chapman	Jennifer Ventura	Susan Pendergraft

** School lead teacher for the project

Collaboration with Dr. Van Tassel-Baska

Dr. VanTassel-Baska met individually with the following groups: the district leadership team, school principals, secondary supervisors, technical support co-leaders, and the parent stakeholders on the board of the Gifted Association of Pinellas (GAP). Her expertise and support were invaluable in this project.

District Leadership Team	Bill Lawrence, Director, Advanced Academics Jenny Klimis, ESE Supervisor, Gifted
Principals of Middle School Centers for Gifted Studies	Brenda Poff, Dunedin Highland Bill Corbett, Morgan Fitzgerald Dallas Jackson, Thurgood Marshall Fundamental
Secondary Supervisors	Linda Whitley, Social Studies Blythe Lamy, Science Rose Mack, Math Sue Castleman, Fine Arts Jean Reynolds, Music Education
Project Technical Support co-leaders	Sally Baynard, Barbe O'Steen
Parent stakeholders - GAP board	Adrian Archer, Tara Armstrong, Elizabeth Linder, Johanna Moseley

Collaboration among Technical Support Co-leaders, Lead Teachers, Content Teachers and Gifted Supervisor

Project Technical Support co-leaders	Sally Baynard, Barbe O'Steen
School Lead Teachers	Meagan Studebaker, Sheila Stewart, Susan Wischweh
Language Arts Teachers	Kathleen Earle, Susan Houser-Murphy, Della Shuler, Lisa Micalizzi
Social Studies	Robyn Angelo, Keri Giordano, Meagan Studebaker

Collaboration among students at the three Middle School Centers

Students from the three sites collaborated in the culminating activity by “discovering” and analyzing artifacts of the mystery civilizations.

Dunedin Highland	83
Morgan Fitzgerald	89
Thurgood Marshall Fundamental	129

Participants:

Participants	Number	Participants	Number
Gifted students	301	Teachers of gifted	20
Administrators	6	Parents	4
Total Participants	331		

Student Population

The student population was comprised of the 301 sixth grade gifted students at the three Middle School Centers for Gifted Studies.

Personnel:

Technical Support Co-leaders (2)

The co-leaders were responsible for implementation, technical support and monitoring of the virtual technologies used for cross-school collaborative activities of teachers. The co-leaders for

the project, Sally Baynard and Barbe O'Steen were uniquely qualified for this responsibility as they both teach the gifted endorsement courses, including the curriculum course.

School Lead Teachers (3) – Each school had a lead teacher who was responsible for ensuring effective implementation, monitoring and evaluation of the project.

III. Evaluation

A. Assessment of Student Performance

Goal 1: Gifted students will increase advanced academic performance.

Objective 1.1: 90% of students will show increased advanced content knowledge of social studies.

“ABC’s of the Ancient World”, was designed to determine growth in the ancient civilizations through the use of content fluency. The expectation was that students would demonstrate gained knowledge by identifying an increased number of terms specific to ancient civilizations. 55% of the students showed growth on this measure. It was noted that although the targeted goal was not reached based on the total number of points, most of the students did show an increase in the number of specific terms used as opposed to general terms.

The second activity combined demonstration of content knowledge and academic writing. Students were asked to write a new chapter for their social studies text, *History Alive!* The chapter was to describe an imaginary ancient civilization. This writing assignment required them to write in the role of a historian/text book author. The expectation was that students would demonstrate increased knowledge of the characteristics and notable features of a civilization. 81% of the students showed a gain on this assessment. In comparing the pre and post writing assessments, it was noted that the pre- assessments were much more creative in the description of the civilization and its people. The post assessments did take on a more “textbook-like” quality.

Objective 1.2: 90% of students will increase skills in advanced academic writing. The punctuation, grammar and spelling of the writing assessment were rated on a rubric.

56% of the students showed an increase. 42% showed no change but it was noted that most of these students had earned a score of “excellent” on the pre-assessment.

Goal 2: Increase collaborative practice of gifted teachers within interdisciplinary teams.

Objective 2.1: 90% of teachers will use collaborative technologies.

100% of the targeted subject area teachers, social studies and language arts, used the technologies.

83% of the teachers used the Moodle site for collaboration.

Objective 2.2: 90% will participate in collaborative development of integrated curriculum.

100% of the teachers participated in the development of integrated curriculum.

B. Project Evaluation

The project was evaluated by collaboration and reflections of the sixth grade team, technical support co-leaders and gifted supervisor. Overall reflections were satisfactory at the work accomplished. After one year of hard work to accomplish the goal of innovative redesign of curriculum, the team has shown growth in knowledge of gifted pedagogy and an understanding of what it takes to integrate curriculum.

The work initially begun through the *Ancient Civilizations, Virtual Investigations: A 21st Century Collaboration* will continue. The need for collaboration among teachers is still a critical issue. The teachers met for training June 21-23 to continue working on the development of the integrated curriculum. They voiced the need to have the opportunity to plan together and share best practices. District funds will be used to contract the technical support co-leaders for 2010-11. The virtual collaboration will expand to use the Illuminate platform. District funds will also be sought to continue the partnership with Dr. VanTassel-Baska for professional development as the Middle School Centers add the seventh grade class in 2010-11.

IV. Dissemination

- Principals were updated monthly on project activities.
- District electronic gifted file and Moodle site were continuously updated.
- Project lesson plans were shared electronically among teachers on the gifted at the Moodle site.
- FLAG proposal submitted June 2010 for October 2010 conference.
- Project results shared with school teams, principals, district team, and parent stakeholders during July/August 2010.
- Project results will be shared by phone conference or email with Dr. Van Tassel-Baska.
- District course code for the 6th grade social studies course will be shared with schools October/November 2010.

V. Budget

Item	Specifics	Cost
Materials/Supplies	<i>Curriculum Planning and Instructional Design for Gifted Learners</i>	\$1,867.00
Equipment	Web cams	\$950.00
Personnel	Personnel/Fringe	\$2,340.00
	2 technical support co-leaders	\$624.00
	3 school project team leaders	\$519.00
Contractual	Professional development	\$3,700.00
Total		\$10,000.00

VI. Contact Person

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