



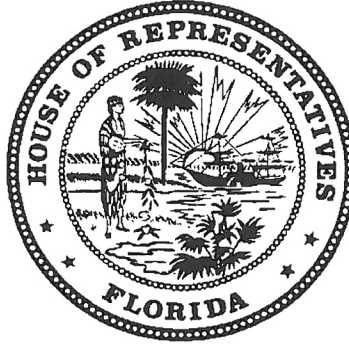
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**K - 12**  
**Subcommittee**  
**Tuesday, October 8, 2013**  
**12:30 p.m. – 3:00 p.m.**  
**17 HOB**

**Meeting Packet**

**Will Weatherford**  
Speaker

**Janet H. Adkins**  
Chair



## AGENDA

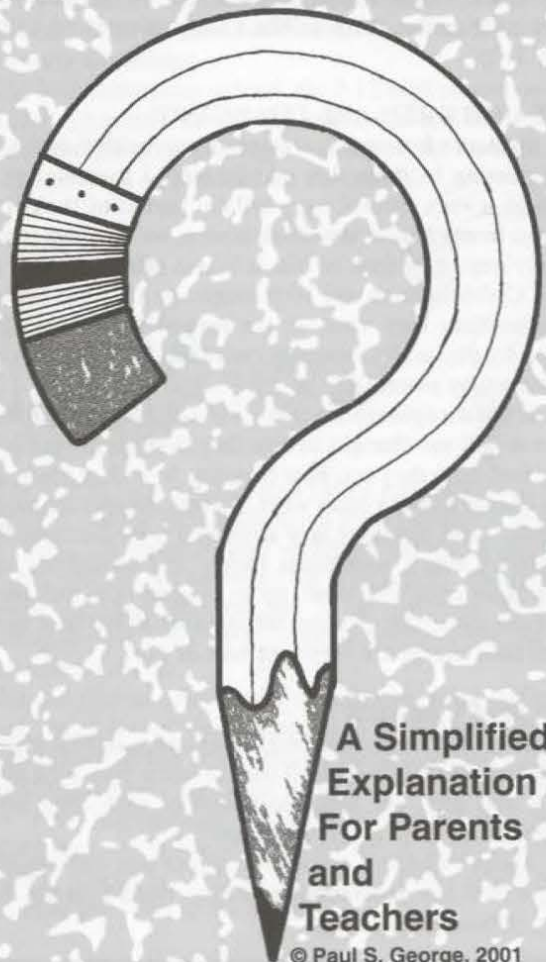
K-12 Subcommittee  
October 8, 2013  
12:30 p.m. – 3:00 p.m.

### 17 HOB

- I. Call to Order/Roll Call
- II. Opening Remarks
- III. Presentations and panel discussion on middle grades reform by
  - University of Florida
    - Dr. Paul S. George, Distinguished Professor of Education, Emeritus
  - Wakulla County School District
    - Mike Barwick, Principal, Wakulla Middle School
  - St. Johns County School District
    - Lisa Kunze, Principal, Switzerland Point Middle School
  - SunBay Digital Mathematics
    - Dr. Vivian Fueyo – Vice Chancellor, University of South Florida, St. Petersburg College of Education
    - Larry Langebrake – Director, SRI International, St. Petersburg
  - Broward County School District
    - Christine Semisch, Middle School Director, Office of School Performance and Accountability
  - University of Florida
    - Dr. Don Pemberton – Director, The University of Florida Lastinger Center for Learning
- IV. Closing Remarks and Adjournment



# WHAT IS A MIDDLE SCHOOL — REALLY

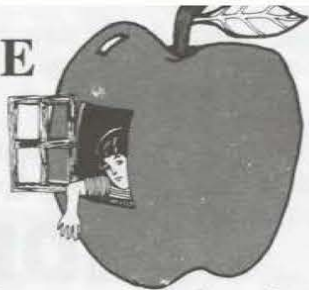


A Simplified  
Explanation  
For Parents  
and  
Teachers

© Paul S. George, 2001



# WELCOME TO THE MIDDLE SCHOOL!



This pamphlet is for parents and teachers who are new to Middle School. We'll try to keep the explanation short and simple because we know that your time is important. But we also want to be sure you grasp the ideas clearly, since your child's or your students' success depends a great deal on your understanding and support for the school. We'll start by discussing what educators have learned about children of this age and what these students need to succeed in school. Then you will read about what the name Middle School really means. Finally, there will be some questions and answers about Middle School often asked by parents and teachers, and, if you're still confused or would like more information, there will be a suggestion of where to go for more help.

## THE CHILDREN ARE CHANGING!

Evidence from medical science, psychology, and other areas is beginning to show that middle school students are passing through a very special, very critical period of their lives. The change from childhood to adolescence, we now see, is a tremendously important time of life. It is also often a terribly difficult time. Children, from age 10 through age 15, must endure more changes than they will for the rest of their lives. They are changing physically, sexually, mentally, socially, emotionally; in every way possible.

If you are a parent or a teacher of a child in this age range, you have or will see changes in how they think, how they look, how they feel, how they act, how they eat, how they grow, and how they change in many other ways. If these changes are hard for you to understand, just think how difficult it is for the child. If you are frustrated, angry, sometimes happy, and sometimes sad about your experience with them, try to imagine how they feel. There are more important changes taking place at this time than at any other time except the very first year of life!

## Physical Changes

The children are changing biologically, and it doesn't take an expert to tell that "they don't stay children very long anymore." Boys and girls are taller and heavier than their parents or grandparents were at the same age.

Today's children are also healthier and can expect to live longer than any generation in history. But this is not the whole story of biological change.

This is the age of the "growth spurt." Children grow more in height and weight during these years than during any other period. Girls before boys, but by the beginning of high school most boys have begun to catch up and pass the girls in physical growth. Students are faced with new bodies, in muscular and skeletal terms, which must be mastered all over again. Self-consciousness about physical appearance is probably as high as it will ever be. Parents may wonder what they do in front of the mirror all that time.

Puberty, the arrival of adult sexual abilities, has been appearing earlier and earlier with each passing generation. One hundred years ago puberty arrived, for the average American girl, at about 16.5 years of age (Do you remember "Sweet sixteen and never been kissed?" It may have been true in 1870, but it sounds strange today.) Medical science says that today our average American girl reaches puberty at 11.5 years old!! This is a drop of five years in the last century! Today's twelve year old is certainly not the same as she was in Grandma's day, and things will probably never return to what they were. Today's early adolescent is much more sexually mature in both a physical and a social sense, boys as well as girls.

Why is this happening? Improved nutrition and diets. More and earlier immunization to disease. Better medical care. Increased use of vitamins and minerals. Perhaps even things like the kind of treated food that is given to livestock these days. For whatever reason, however, the fact is that when it comes to sexual maturity, our children have changed. We need to realize this. Today's twelve-year-old is motivated by things that used to be reserved for youths ten years older.

## Mental Changes

The story is similar in the area of mental changes. Today's early adolescent is not easily impressed. They have had more exposure to the world than any generation in history. Nursery school, kindergarten, radio, television, movies, and magazines have taught them a great deal about the world long before they come to school. Most children have traveled farther, moved more frequently, and seen more places by the time they enter middle school than their grandparents did in a lifetime.

Our society's children are by and large, brighter and more knowledgeable than past generations could have dreamed about. They come to school with vocabularies that surprise us in more ways than one! They may not be better students, but the same old thing just doesn't work in today's classroom. In Abraham Lincoln's day students were starving for information; today they are stuffed to overflowing with it.

Parents and teachers need to know one other fact about the minds of our children. It is during the years they spend in Middle School that most of the students will undergo a profound change in their ability to think. This is not a change in their I.Q., and it is not becoming smarter in the usual sense.



Their minds change from childlike to adult, not so much in **what** they think but in **how** they think. Young children have to see, taste, hear, touch, and manipulate in order to learn well. They do not have what might be called advanced thinking power; not until sometime during the Middle School years. For some it may come early, for some not until the end, but most will have achieved this step on the ladder to adulthood before they go to the high school. Parents and teachers must know about this in order for students to do their very best in school.

## Social Changes

The peer group used to be important when discussing the lives of seventeen-year-old students. Now it is critical in the lives of children ages ten and eleven, or younger. Parents and teachers who are used to being the absolute center of their children's lives are often shocked and dismayed when they discover this is no longer the case. Most elementary school settings are poorly equipped to deal with this phenomenon.

In a similar way, most early adolescents are driven by a tremendous need for independence and autonomy. They want to be their own bosses; to stand on their own two feet. They often resent and resist adult authority. And who are the usual symbols of this adult authority? Sorry, but you're correct if you said parents and teachers! In this sense they seem to have much in common with two-year-olds—It's the "Please, I'd rather do it myself!" time of life all over again.

It's too bad, but in our society a person is what a person does, and most middle school students have precious few ways of being responsible in positive, meaningful ways. It is ironic that we trust our homes and children to a young teen-age girl until 1:00 a.m. on weekends, but at 1:00 p.m. in school we offer her very few ways to be responsible except in pleasing adults, which is not much fun for a young person trying to be independent. One result of this situation is that rejection of adult values and resistance to adult directions become the most tempting ways our youth have to feel separate from us. Little wonder that the term "identity crisis" is so important these days.

This is also usually the time when the "self concept" (what we think about ourselves) sinks to an all time low. Students cannot imagine how anyone as "unattractive" as they are could possibly be worthwhile or valuable to others. They think the whole world is watching them and that pimple on their chin.

This is also the time for rapidly multiplying but short lived interests. Sometimes it seems as though they never finish anything! They try this, sample that, fool with something else, as though life was a buffet set out for them. At their age, it is! There should be a time for exploration and experimentation. Most adults end up with an arm's length list of undiscovered interests and undeveloped talents.

When it comes to physical energy, middle school students are really mysterious. When we want them to be quiet and attentive, they are twitching and bouncy. When we need their physical effort, they seem to be unable to lift a finger from exhaustion. Opportunities for both frequent physical movement and relaxation are a must.

What strange beings these children are. Rapidly changing, unpredictable, difficult to understand and sometimes impossible to deal with. That is, unless we remember that in so many ways they are behaving just like you and I did, except that it is now happening earlier and in a society that offers much more dangerous temptations. When we recall our own difficult days in the process of growing up, and consider how much more difficult it is to grow up in today's world, it should make us stop and think. It should make us realize that although they may not ask for it, today's early adolescent needs the understanding and support of his home and his school much more than his grandparents. Parents and teachers need to work together to make schools for older children and early adolescents places that are designed especially for them. Schools that are designed for and revolve around first grades or high school seniors just don't do the jobs for today's early adolescent.

The K-8 elementary school, the 7-12 high school, even the 7-9 junior high school have failed to keep the middle years from becoming the "Bermuda Triangle" of education. We need something different—a new school for the middle.



## WHAT IS A MIDDLE SCHOOL-REALLY?

The Middle School is a school for the kind of student we just described, a student who is changing from childhood to adolescence. These are students who no longer belong in elementary school but who are not yet ready for high school. The right kind of school for these students has to be different. They need something special. They are at a unique period of life and only a unique school will do.

But this special school in the middle can't be so different, so unusual, that it doesn't fit in between an elementary school and the high school. It has to be special, but it also has to help our students move easily from the elementary school to the high school. Years and years ago the junior high school was invented to make it easier to move from elementary to high school. Now the Middle School is trying to do an even better job of being a bridge from one level to the other.



## The Middle School: Unique and Transitional

School Programs	Elementary	Middle	High
1. Teacher-student Relations	Parental	Advisor	Choice
2. Teacher Organization	Self-contained	Interdisciplinary Team	Department
3. Curriculum	Skills	Exploration	Depth
4. Schedule	Self-contained	Flexible Block	Periods
5. Instruction	Teacher-directed	Balanced	Student-directed
6. Student Grouping	Chronological	Supportive	Subject
7. Teacher preparation	Child-oriented Generalist	Flexible Resource	Academic Specialist
8. Building Organization	Single Classroom	Team Areas	Department
9. Co-curriculum	All Participate	By Choice	By Ability
10. Governance	Principal & teachers	Principal & Council	Principal & Dept. Heads

Figure One

The Middle School has to be unique but it also must be transitional. It has to lead from the elementary to the high school, and still do something special in the middle. Figure One, shows us how this might look if we made a chart out of it. On the left side is a list of the most important parts of any school program, from the kind of relationships the school expect between teachers and students, to the type of extra curricular activities that are available.

Assuming that you are more familiar with the programs in elementary and high school, we will not dwell on them here. Our apologies for any confusion this may create.

If the school in the middle is really going to be different, then obviously the program of the elementary school won't fit. It is intended for young children and never did take care of the older ones. Just as obviously, we hope, what is intended for high school seniors can't really be right for sixth or seventh grades. What is a good middle school program—really??

Here are the essentials. They may look different in the school you're familiar with, it may have a different name, or some of them may not be a part of the program. Many middle schools include one or more of these in their program:

### 1. An Advisor-Advisee Program

Every student has an advisor, a teacher who is the school expert on that child and a small group of others. They meet together regularly, in addition to the class time they spend together. This teacher isn't a "mommy" or a stranger, but a special friend to come to; a "homebase" teacher.

### 2. Interdisciplinary Teacher Organization

"Interdisciplinary" means that the teachers are from different subject areas. Groups of teachers, usually from two to five, share the same students, the same schedule and the same part of the building. They also share responsibility for planning the instruction in more than one area of the curriculum. When they meet together they usually talk about their students rather than one particular academic area.

### 3. Skills Through Exploration

The Middle School knows that skills are very important. But providing an exciting curriculum to students who "tune out" easily is also a priority. The Middle School knows that just repeating what students did in the elementary school is not wise. Restricting the curriculum to the dull, the dry, and to drill doesn't work with teen-agers. But they are not ready for large doses of subject matter, as if they were just short college students. The high school curriculum is for the high school! Pushing it down into the Middle School just guarantees boredom in high school. Exploratory curriculum is the key to skill building in Middle School.

### 4. Block Schedule

Time is organized differently in a Middle School too. Not one big block of time controlled by each teacher. Not seven or eight "periods" controlled only by bells from the office. The Middle School day is, divided into several large, e blocks of time controlled jointly by the teachers and the office, so it is often called a "block" schedule. If your school uses one, ask the principal to explain it to you. (If there is no block schedule, ask why not!)

## 5. Balanced Instruction

Teachers don't "wipe their students' noses" in a good Middle School. Nor do they treat the students as though they were mature adults. When teaching, every effort is given to strike a good balance, to help students learn how to learn.

## 6. Supportive Grouping

Because Middle School students are so different from each other, putting them together in rigid grade levels is sometimes a bad idea. Letting them group themselves, by the subjects they choose, belongs in high school. In the Middle School, sometimes students and teachers are put together on a team that stays together for two or more years. This lets teachers and students do what used to happen in the old one room schoolhouse—they really get to know each other! This means they learn more and discipline problems go down. If your school is involved in a version of this grouping, or considering it, you should be very glad. It will be very helpful to everyone involved. Middle School also supports heterogeneous grouping, in the belief that students should learn in ways that are like the ways in which they will live and work as adults.

## 7. Team Areas

You can always tell when you are in a real Middle School building. And it doesn't have anything to do with whether the building is a new "open space" one or an older traditional one. Real Middle Schools don't have many self-contained classrooms or "departments" like math or science. They have team areas, where the teachers and the students on the team spend most of their time every day.

## 8. Interest-based Activities

When it comes to extra curricular things like athletics, clubs, and other special activities, the Middle School has its own way too. Middle schools don't require that everyone do everything. Nor do they restrict the activities to participation by those who have special abilities, as in high school interscholastic sports. In the Middle School everyone who wants to be involved can be, whether it's intramural or interscholastic sports, or other special interest activities. Interested participation is the key. Rewards are not distributed just to those students whose earlier maturation or abilities allow them to dominate their peers.

This is the Middle School—really! Teachers involved with their students, working closely with other teachers to produce a basic but exciting curriculum. With the day, the building, the grouping, and the teaching organized to fit teacher and student needs. All in all it should be a place to feel good about!

## BUT I STILL HAVE MY DOUBTS!

**Question 1** Exactly what is the definition of the term "Middle School?"

**Answer:** The most widely accepted definition is "A school providing a program for a range of older children, pre-adolescents, and early adolescents that builds upon the elementary school program for younger children and in turn is built upon by the high school's program for adolescence."

**Question 2** Exactly?

**Answer:** A school having grades 6 and 7 and not extending below 4 or above grade 8.

**Question 3** How "new" is the Middle School concept?

**Answer:** It is really not new at all. It began with the birth of the "junior high school" idea nearly half a century ago. Many of its central concepts are much older than that. Some come from the old one room schoolhouse. The term "Middle School" has been used for about 30 years.

**Question 4** How many Middle Schools are there?

**Answer:** By the year 2000 there should be at least 15,000.

**Question 5** Where are they?

**Answer:** In all 50 states.

**Question 6** What is the difference between the Middle School and the Junior High School?

**Answer:** In theory, almost nothing. In practice, most junior high schools seem to be exactly like senior high schools. The Middle School is attempting to be what the junior high school said it wanted to be: a special school in the middle for students with special needs. Some junior high schools are now changing back to their original purposes, too.

**Question 7** Then why not just make changes in the junior high schools we already have?

**Answer:** Three reasons: (1) The students are different than they were almost a century ago when the Junior High School began; (2) Changing the name makes it easier to improve other things in the school; (3) Many junior high schools are very resistant to change.

**Question 8** Does the fifth grade belong in the Middle School?

**Answer:** Yes. When available space and numbers of students make it feasible. Experience shows that good things, not bad, happen when older and younger students (e.g., fifth and eighth graders) are housed in the same school. If you are a parent of a 5th grader, you shouldn't be overly concerned.



**Question 9** What about 9th grade?

**Answer:** No one seems to want it, but it has always been a part of the high school, even when it was housed with 7th and 8th grades. It belongs there now.

**Question 10** Is it true that many Middle Schools were organized as a part of desegregation or in response to declining enrollments?

**Answer:** Yes. That doesn't mean the Middle School isn't a good idea anyway!

**Question 11** What are the best reasons for having all these Middle Schools?

**Answer:** (1) Our children have changed; (2) Old ways of providing for their educational needs failed; (3) Middle Schools work well.

**Question 12** Is competition bad for Middle School students?

**Answer:** No, as long as everyone who is interested has an opportunity to participate, appropriate activities are chosen, and cooperation is also valued.

**Question 13** What about interscholastic sports, then?

**Answer:** Very few interscholastic sports programs for this age group seem to be successful. Too often the sport is too advanced or too dangerous for the changing early adolescent. Frequently these activities reward only those boys who have been lucky enough to mature early. Just as often, the sport involves long bus rides, late nights and inappropriate levels of stress. Most physicians recommend discontinuing these programs in favor of intramural activities open to all boys, and girls, during or immediately following the school day.

**Question 14** What about the marching band?

**Answer:** Most Middle School educators believe that all students should be introduced to the joy of music. And that most of the public money for music programs should not be spent in programs in which only a few, already talented musicians can participate. Parents of these talented musicians must still be expected to provide the financial support for these activities.

**Question 15** Does a Middle School have to be in a new school?

**Answer:** Absolutely not.

**Question 16** Do Middle Schools ignore the "Basics?"

**Answer:** No. Middle Schools are much more devoted to teaching basic skills (such as reading) than the junior high or K-3 schools ever were. Remember, the adults and college students who are supposedly having trouble with basic skills were educated by the traditional system, not by the Middle School.

**Question 17** Does academic achievement suffer in the Middle School?

**Answer:** No. Although the research is not totally reliable, it looks as though most Middle School students learn just a little more than do students in other kinds of schools. And they do much better affectively.

**Question 18** What do you mean by "affectively?"

**Answer:** It means that when it comes to improving the self concept, moral development, social and emotional knowledge, etc., Middle School students fare better than others.

**Question 19** Do Middle School teachers always use "individualized instruction" or "cooperative learning"?

**Answer:** No. Each teacher has his or her own "best way." There is no one "right" way to teach.

**Question 20** Are Middle Schools more permissive than other schools?

**Answer:** No. They are organized to allow teachers to learn to know and care more about your child.

**Question 21** What type of teacher is best for the Middle School?

**Answer:** A person who is both humane and knowledgeable. Someone who enjoys teaching this age group. Subject matter expertise is an advantage but not more important than personal warmth and flexibility. Principals usually prefer elementary teachers but desire high school "converts" as well.

**Question 22** My child has so many teachers, how do I find out the "whole story"?

**Answer:** Just ask for a "team conference" about your child.

**Question 23** I still have some unanswered questions, what do I do?

**Answer:** First, if you have not done so, schedule conferences with your child's teacher-advisor, or the school principal. Second, view this set of videos:

"THE MODERN MIDDLE SCHOOL"

Available from: Teacher Education Resources

P.O. Box 13747 Gainesville, FL 32604

1-800-617-2100 Fax 352-336-9131

If your questions are still unanswered, call or write me; I wrote this fastback and I'll be glad to talk with you!

Professor Paul S. George

College of Education

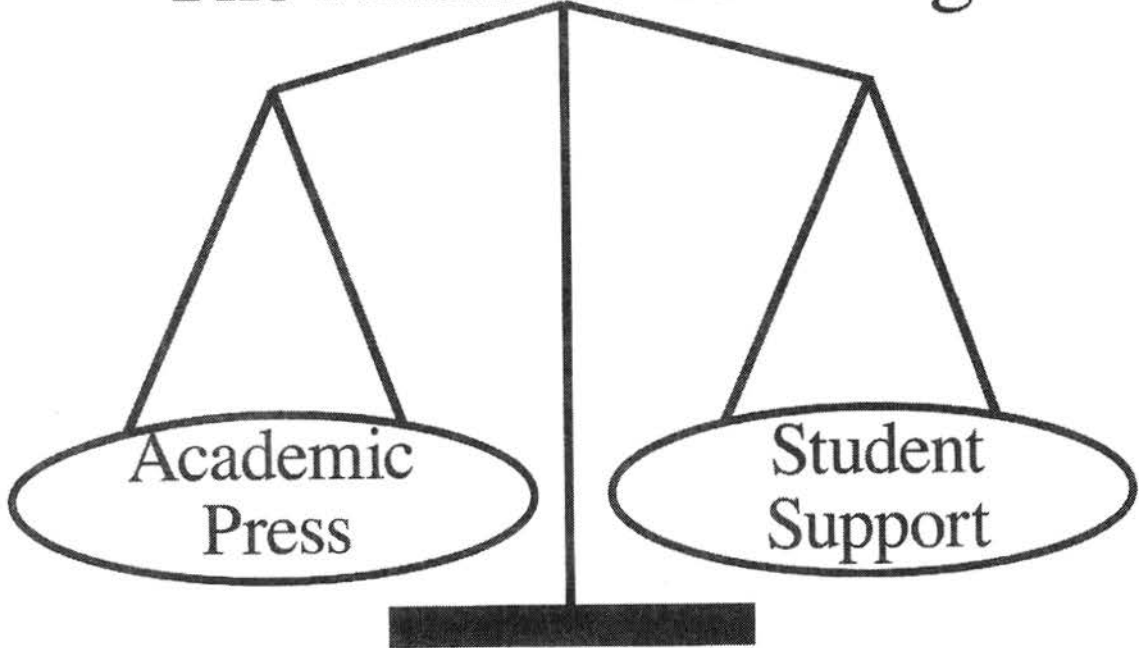
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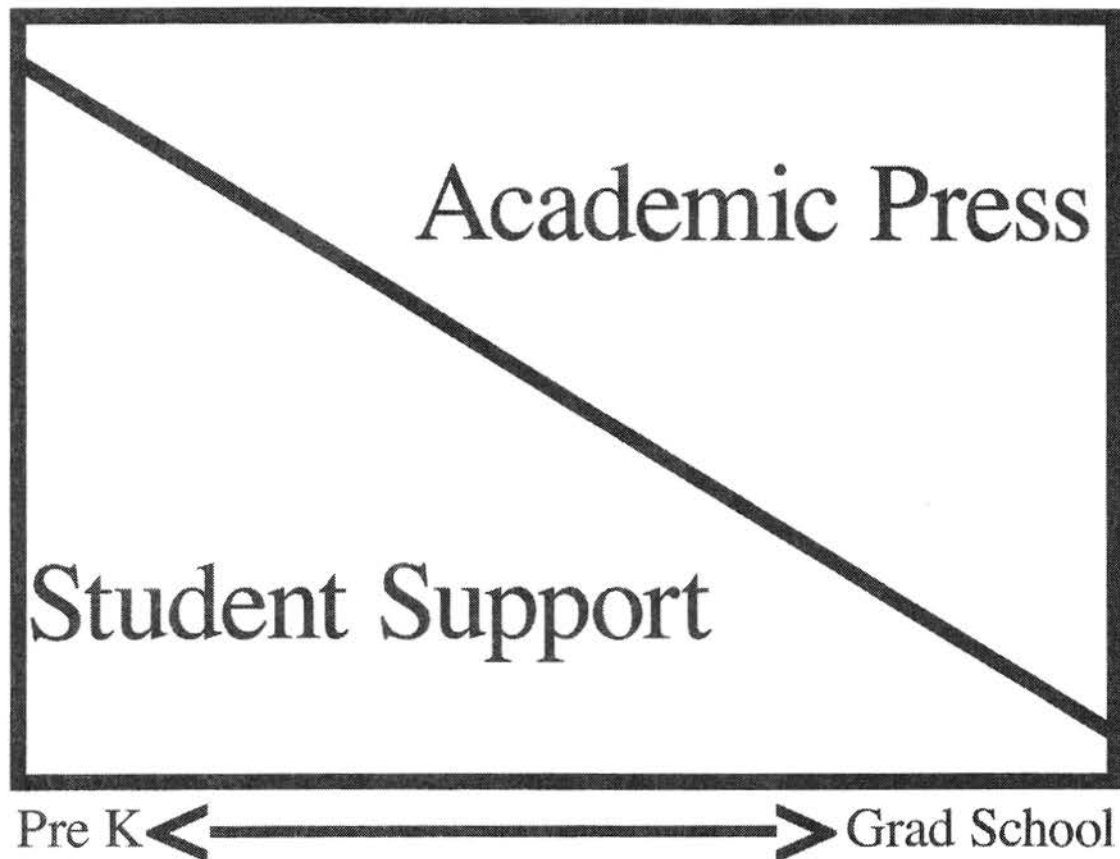
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# The Mission: Learning

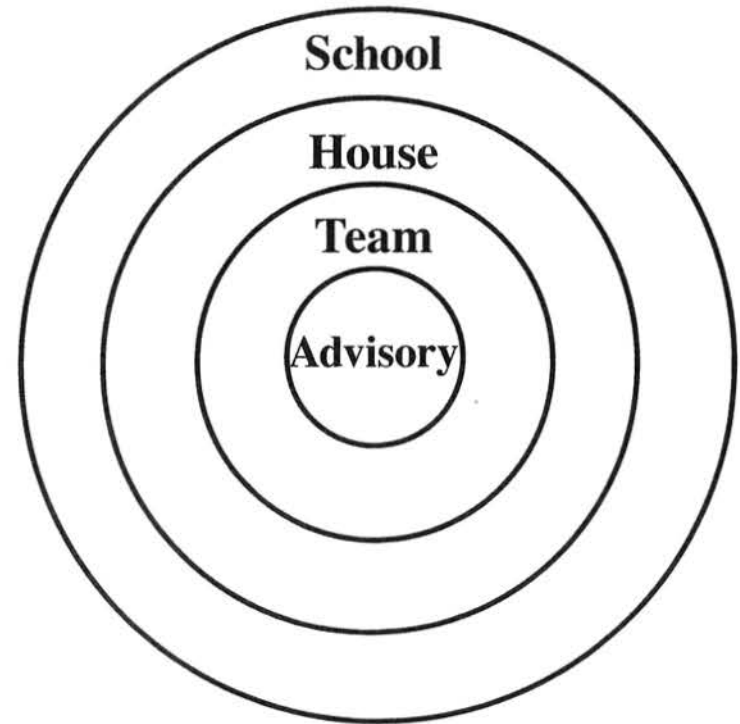
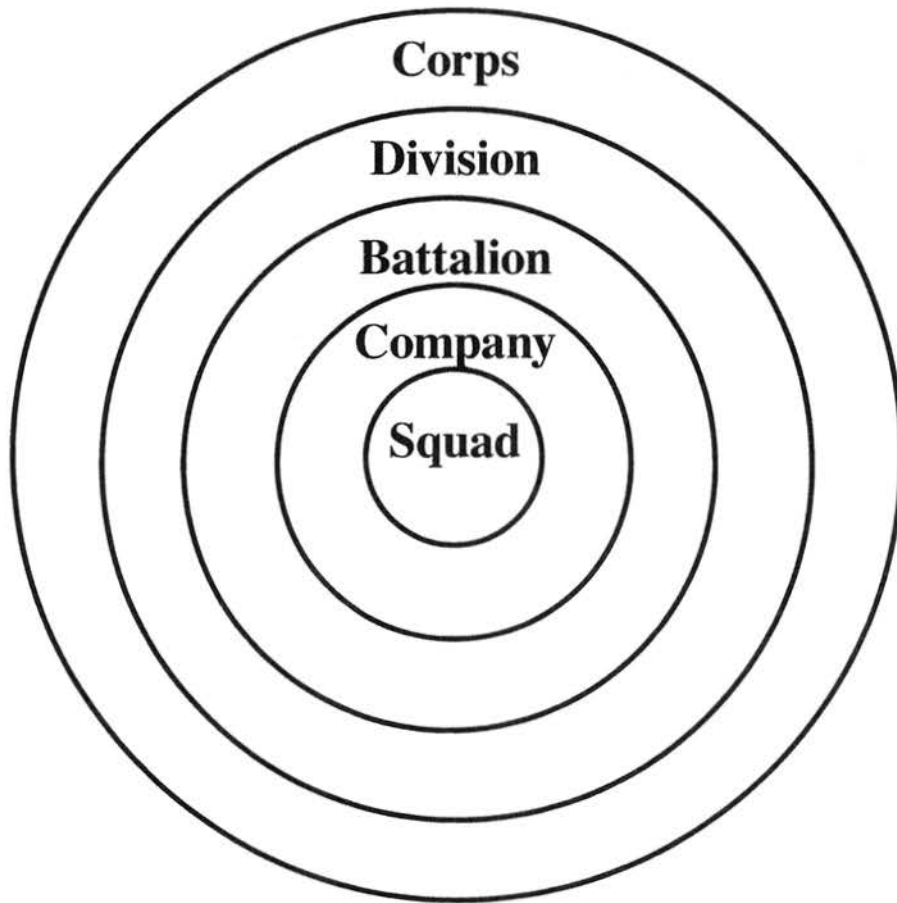


# The Key: Balance

2



# U.S. Marines / Middle Schools

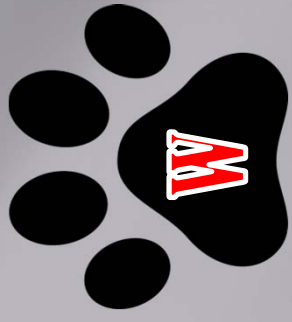






# WAKULLA MIDDLE SCHOOL





# Demographics

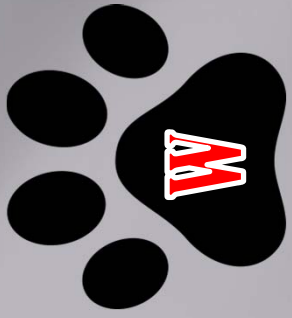
Location	Crawfordville, FL
Year Built	1980
Enrollment	620
% Economically Disadvantaged	53%
% Minority	20%
Number of Teachers	38
Number of Guidance Counselors	1
Number of Administrators	2





# Accountability

- ▣ Wakulla County has been an “A” district 7 out of the last 8 years
- ▣ WMS has been an “A” school for 11 straight years
- ▣ Highest scoring school in the district last year
- ▣ Highest FCAT score or highest gains in district for last 4 years
- ▣ Highest scoring middle school in PAEC Consortium
- ▣ #3 in Big Bend/Panhandle



# 2013 FCAT

WMS      State

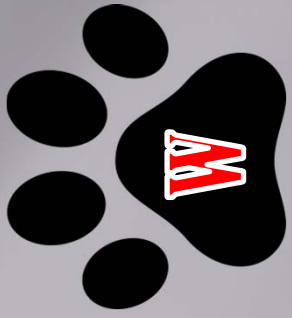
% Proficiency Reading      72      58

% Proficiency Math      68      59



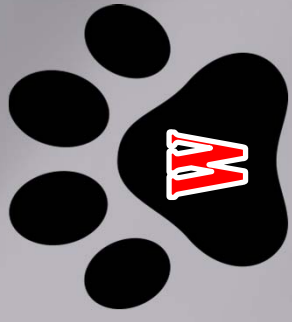
**Why is WMS so  
successful?**





# Strategies

- ▣ True Middle School Concept – School within a school
- ▣ Great teachers – Recruitment & retention
- ▣ Teaming
- ▣ Common planning for teachers
- ▣ Targeted professional development
- ▣ Reading incentive programs
- ▣ Positive behavior support (PBS)
- ▣ Performing Arts
- ▣ District support



# Strategies cont.

- ▣ Intense remediation programs for all level 1 or 2 reading and math students
- ▣ 7 period day - This gives us the ability to remediate students
- ▣ High expectations for ALL students
- ▣ Etc...



# What's most important? What's key?

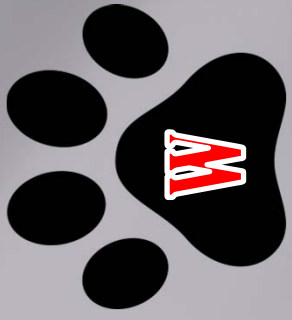
- ▣ Implementation of rigor in all content areas.  
This is part of our vision.
- ▣ Vital as we transition into more rigorous standards in mathematics and English language arts.



# What is Rigor?

- ▣ Rigor is a quality of instruction that requires students to construct meaning for themselves, impose structure on information, integrate individual skills into process, operate within but at the outer edge of their abilities, and apply what they learn in more than one context and to unpredictable situations.





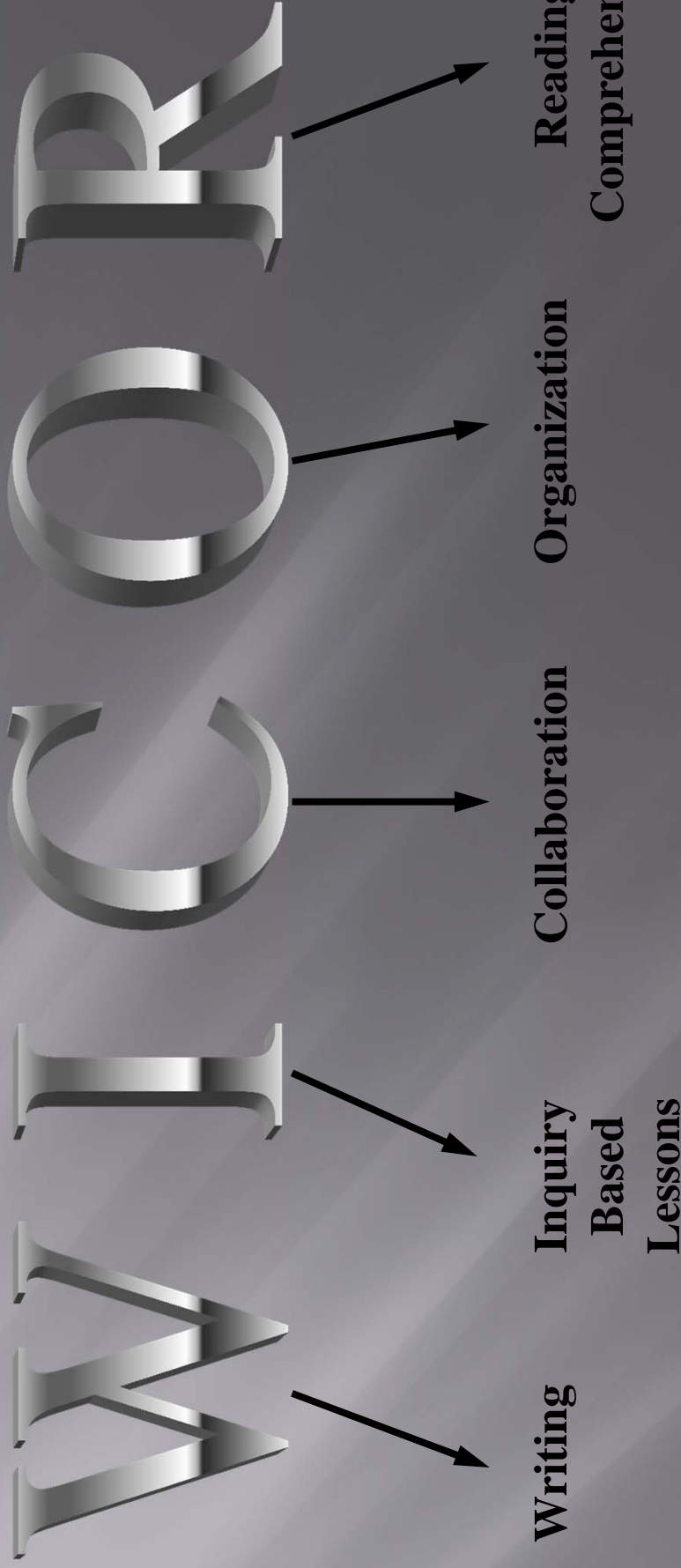
# Why Rigor?

- ▣ Florida's state standards require it.
- ▣ It is what's best for kids!

**\*\*ALL teachers at Wakulla Middle are required to implement rigor in all content areas.**



# What strategies do teachers use?



\*Core learning strategies of AVID.



# WICOR

- Utilizing WICOR strategies to increase rigor
- How does a teacher know that a lesson is rigorous?
  - When it answers the following questions.
    - Do students construct meaning for themselves?
    - Does it impose structure on information?
    - Does it integrate skills into processes?
    - Can students apply their skills in more than one context and to unpredictable situations?



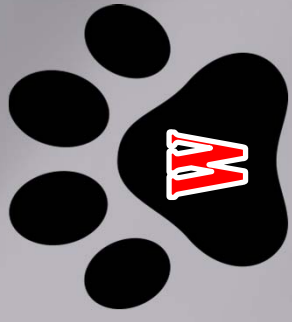
# Preparation

By increasing rigor in all content areas, we are preparing our students for high school (AP and Dual Enrollment Programs) which in turn will better equip them for post-secondary education or their career field.



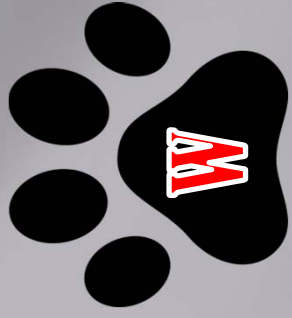


# How has this changed Wakulla Middle School?



**4 years ago...**

We only had 1 section of  
Algebra I in the 8<sup>th</sup> grade  
(This is a high school credit course.)



# NOW...

- ▣ 5 sections of Algebra I in 8<sup>th</sup> grade (HS course)
- ▣ 1 section of Algebra I in 7<sup>th</sup> grade (HS course)
- ▣ 3 sections of Integrated Science in 8<sup>th</sup> grade (HS course)
- ▣ 1 Industry Certification Class (CCC-HS course)
- ▣ 1 8<sup>th</sup> grade AVID elective class
- ▣ 1 7<sup>th</sup> grade AVID elective class
- ▣ 1 8<sup>th</sup> grade Critical Thinking Class for advanced readers



# Once again...

2013 FCAT

WMS                      State

% Proficiency Reading                      72                      58

% Proficiency Math                            68                      59

**\*\*Increasing RIGOR works!**





**I invite you to  
visit my school!**

[Michael.barwick@wcsb.us](mailto:Michael.barwick@wcsb.us)

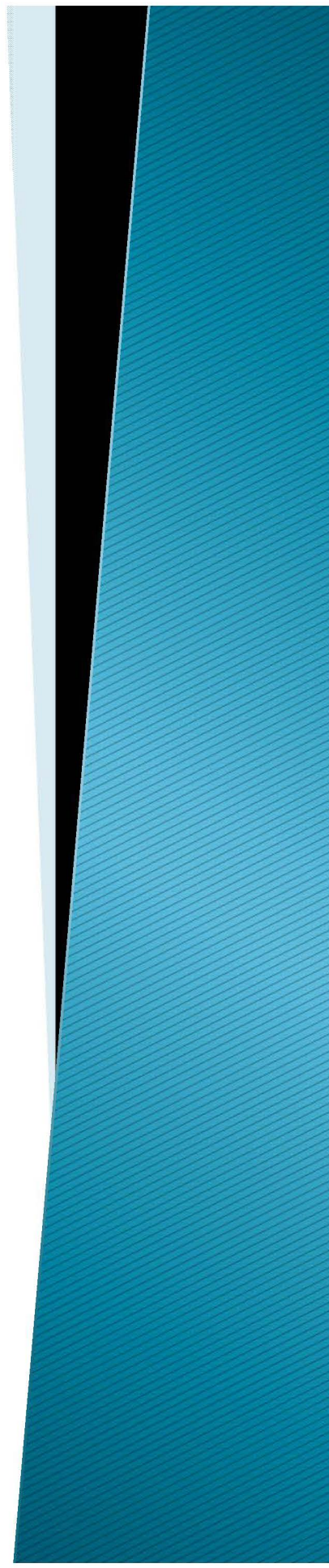


# Switzerland Point MS

Home of the Raiders



Lisa Kunze, Principal





# St. Johns County

- ▶ 7 traditional middle schools grades 6–8
- ▶ 1 K–8 with 2 more opening in 14–15
- ▶ 2 middle schools are Title 1





# Swiss Point MS

- ▶ “A” School since 1999.
- ▶ 1275 students
  - Ethnicity – 6% black, 7% Hispanic, 4% Asian
  - Economically Disadvantaged – 9%
  - ELL – less than 1%
  - Disabled – 15%
- ▶ Level 1 & 2
  - Reading – 205 students (16%)
  - Math – 165 students (13%)



# What makes Swiss Point unique?

- ▶ 5yr plan that we started in summer of 2010 to prepare for requirements of SB736 in 2014-2015

Focus on...standards-based instruction & grading, common assessments, academic rigor, student-centered lessons, writing across content areas using school-wide standards for written work & writing rubric, professional development, and high yield instructional strategies

- ▶ Common Assessment Project
- ▶ Common Planning by subject & grade level
- ▶ Focus on ALL students being ready for EOC exams in 14-15



- ▶ 1 of 15 middle schools in the state last year granted Middle School Career Academy
  - 148 students last year – 75% earned an industry certification in Word, PowerPoint, Excel or Outlook
  - 216 students this year – goal is for 80% of them to earn an industry certification
  - Course counts as a practical arts credit for HS graduation
  - Entry level course for 6 of the career academies in St. Johns
  - This year the course will also meet the virtual requirement needed for graduation



# Student Engagement

- ▶ Standards-based instruction
- ▶ Teachers have “unpacked” the benchmarks into learning goals
- ▶ Students track their progress on learning goals
- ▶ Teachers provide student-centered lessons differentiating instruction
- ▶ Cooperative learning strategies are used
- ▶ Speaking and listening standards are taught
- ▶ Cross-curricular connections are made
- ▶ Social Studies – DBQ Project



# Challenging Students

- ▶ We allow students to pick and choose advanced courses in Language Arts, Science & Social Studies
- ▶ Students can take 1, 2 or 3 advanced courses each year
- ▶ We encourage students to challenge themselves, so they are ready for rigorous courses in high school
- ▶ Algebra Honors (150) & Geometry Honors (75) - 100% pass rate





# Struggling Students

- ▶ Require remedial courses – Intensive Math & Intensive Reading
- ▶ Swiss Point double blocks math and intensive math to allow more time for students to learn and process math concepts
- ▶ Support Facilitation and Co-Teach sections to support students with disabilities
- ▶ Advanced teachers working with these students



# Integrating Technology

- ▶ Classrooms have LCD projectors, so teachers use video streaming and online sites
- ▶ Many teachers are using student response systems “clickers” for immediate feedback
- ▶ Class set of iPads
- ▶ Computer labs for teachers to sign-up to take students



# Focus on 6<sup>th</sup> grade

- ▶ 6<sup>th</sup> grade camp – 2 full days in the summer to prepare them for the transition to middle school
- ▶ Level 1 & 2 students
  - Supported in World History, Science and in Math along with Intensive Reading
- ▶ New course – Reading Plus program, typing, Word, PowerPoint, Internet use, Cyber safety
- ▶ Teen Leadership – time management, goal setting, leadership skills, Character Counts!



# Professional Development

- ▶ Focus at Swiss Point aligned to 5yr plan....
  - “Unpacking” standards into learning goals
  - Assessment writing
  - Standards–based grading
  - Learner–centered classroom
  - Cooperative learning strategies
  - Higher order questioning
  - Differentiated Instruction
  - Tracking student progress & feedback
  - High–yield instructional strategies
  - Meeting with high school teachers



# District Support

- ▶ In St. Johns, Dr. Joyner, Superintendent, believes in school-based decision making
- ▶ We have control over budget decisions, hiring, courses offered, master schedule, remedial programs, supplemental materials, professional development
- ▶ District provides basic guidelines and is supportive of schools and their unique needs





# AVID Program

3 middle schools in St. Johns County offer AVID program.

- ▶ AVID focuses on students in the "academic middle" by providing additional support so that the students can take and be successful in college-ready, rigorous course work
- ▶ MS students in AVID in SJCSD have tremendous pass rates in Algebra I Honors in 8th grade
- ▶ Students are afforded tutorial sessions twice per week by local college students. Tutorials are facilitated inquiry sessions where students question other students regarding points of confusion with learning
- ▶ District-wide, students in the AVID cohort show the greatest learning gains in reading and mathematics



# Middle years IB Program

at Pacetti Bay MS

- ▶ Provides a framework of learning which encourages students to become creative, critical and reflective thinkers
- ▶ Emphasizes intellectual challenge, encouraging students to make connections between their studies in traditional subjects and to the real world
- ▶ Fosters the development of skills for communication, intercultural understanding and global engagement, qualities that are essential for life in the 21st century
- ▶ There are 58 IB Middle Years Programs in Florida, 487 in US and 1,022 in the World.







USF St. Petersburg  
SRI International

*A Brief Report on SunBay Digital Mathematics for Middle Grades*

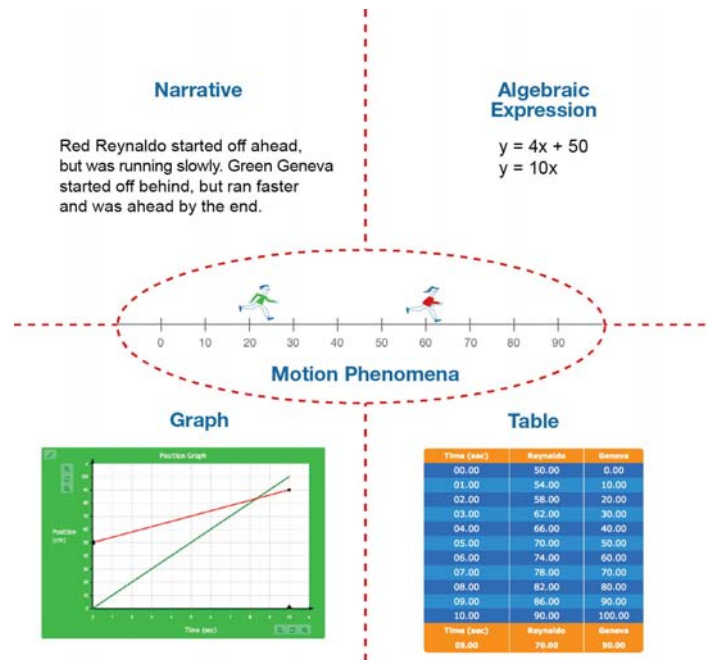
*October 8, 2013*

**What is SunBay Math?**

SunBay Math systematically integrates curriculum modules tied to high standards, technology-based dynamic representations that deepen mathematics learning, and teacher professional development. Students build mathematical meaning by thinking critically to solve complex problems and understand proportionality and linear functions in a connected and coherent way. By leveraging technology, students visualize, interact with, and analyze mathematical representations (graphs, tables, algebraic expressions) connected to dynamic simulations of real-life phenomena (see Figure 1). Through a planned sequence of professional development, teachers are engaged in mastering essential knowledge and skills in mathematics. As a result, when teaching the units, the teachers have the knowledge and skills to engage their students in this interaction between the software, the materials, and the mathematics.

Curricular Alignment. There are three SunBay Math learning modules for grades 6 through 8: Managing the Soccer Team – A unit on rate and proportionality; Captured in St. Petersburg – A module on similarity; and Designing Mobile Games – A module on linear functions. The mathematics content of the units and the process of instruction in the learning modules align equally well with the rigorous state standards. In addition, the SunBay learning modules are also carefully aligned with the FCAT 2.0 reporting categories.

**Figure 1:** SunBay integrates key mathematical representations with real-world phenomena



## Pilot Results

In Pinellas County, our quasi-experiment compared 13 seventh-grade teachers in PCS (246 students) with our Texas treatment and control groups. These analyses showed the same learning gains and revealed no detectable differences between the Florida and Texas treatment groups' pretest and gain scores (Figure 2).

**Figure 2.** SunBay shows effectiveness compared to a control group, and equal to TX study

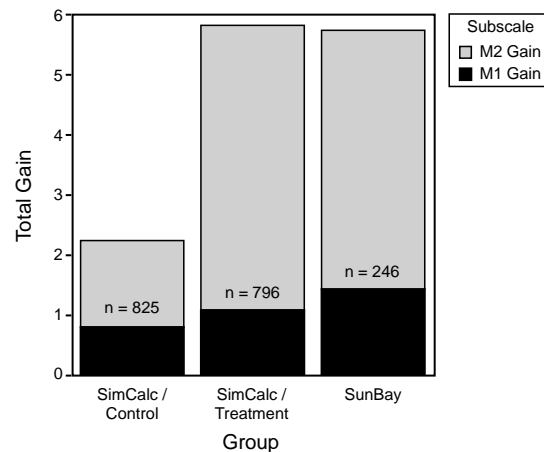
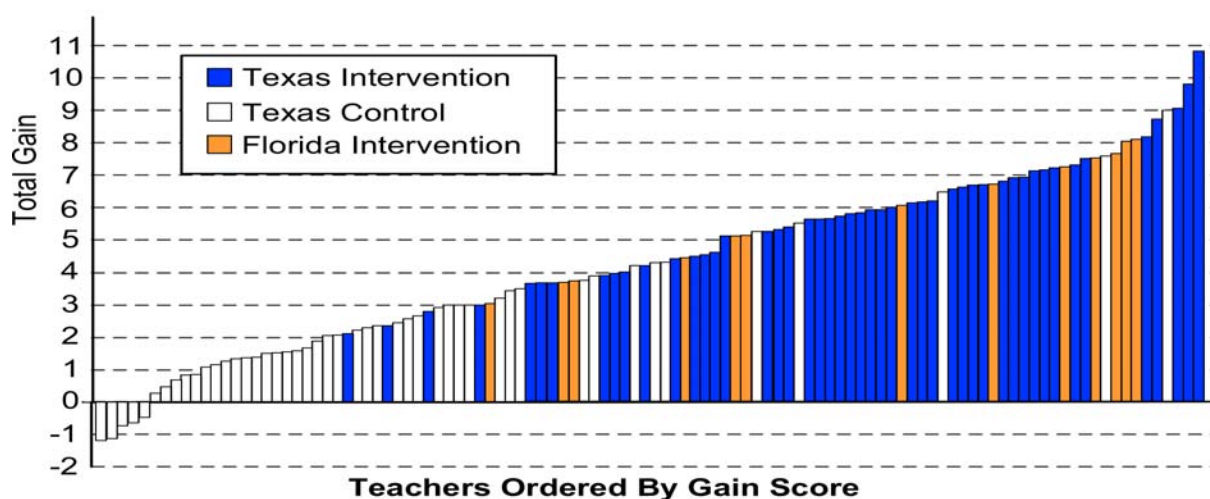




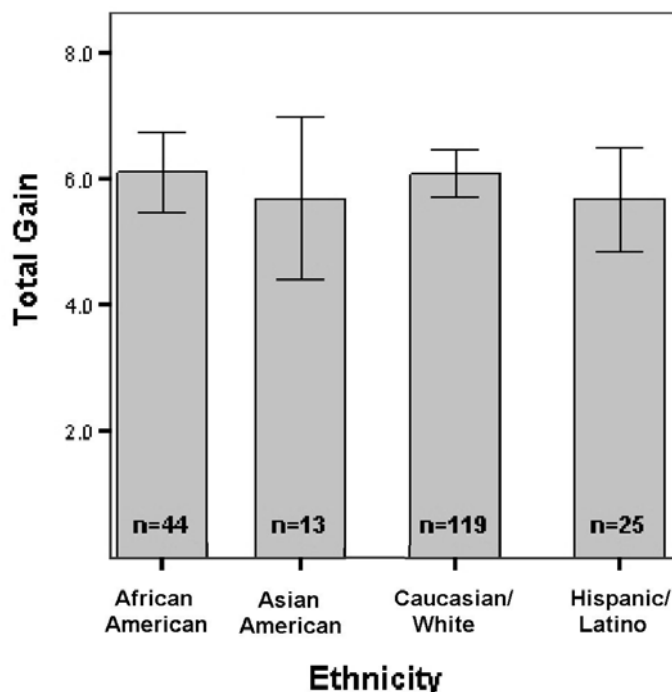
Figure 3 shows the classroom mean gain scores for all the teachers who participated in Florida, as well as all the teachers who participated in SRI's earlier successful experiment in the state of Texas. This graph shows that students of teachers using the SunBay intervention, in both Texas and Florida, showed consistently higher learning gains than students in Control classrooms who were taught by more traditional means.

**Figure 3:** The spread of mean classroom student gains shows the consistent effectiveness of the SunBay approach in both Florida and Texas



Our analysis also shows that learning gains were consistent regardless of prior math achievement and student ethnicity, providing evidence that the SunBay Digital Mathematics materials can be effective for the wide range of students and teachers found in Pinellas County (See Figure 4). In addition, we found significant learning gains for the 18% of students categorized as African American ( $n = 44$ ,  $z = 8.1$ ,  $p < .0001$ ), and the magnitude of the gain was the same as that for other subpopulations both in Florida and in Texas. We also found a statistically significant correlation between students' scores on our tests and their FCAT scores ( $r = 0.72$ ,  $p < .01$ ). The approach was also found to be effective for a new geometry unit developed to meet the needs of PCS.

**Figure 4:** Student learning was similar across ethnicities. The error bars, which overlap across all groups, show that mean total gain was statistically the same across groups



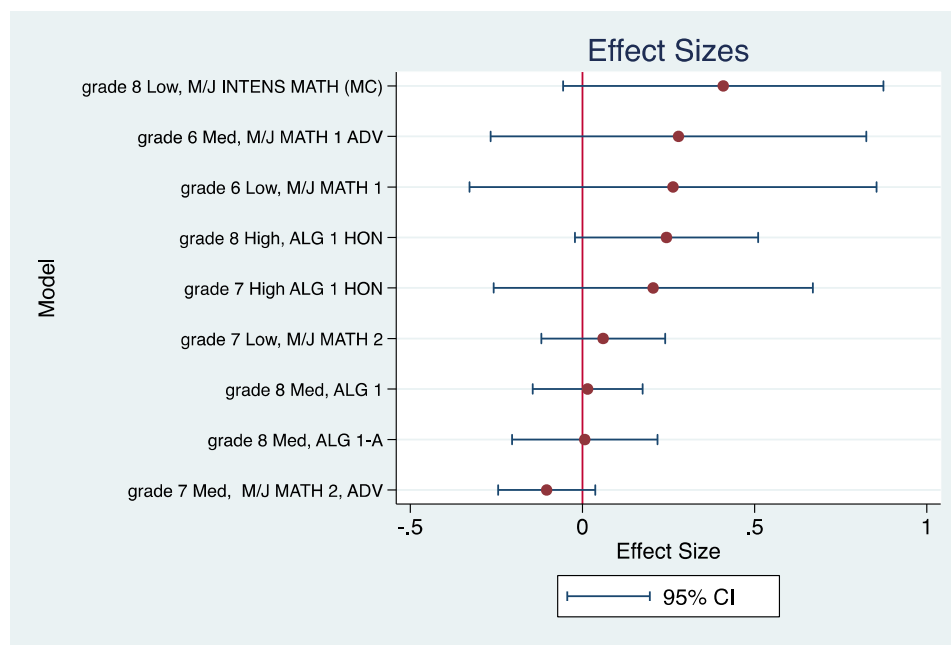
### Independent Evaluation

In a more recent SunBay study in Florida, funded by the Next Generation Learning Challenges out of the Gates Foundation, an independent evaluation found that SunBay was effective. Analysis found a trend suggestive of a positive correlation between using SunBay mathematics use and relevant FCAT subscales. In this study SunBay was used in a number of classes in Pinellas County. SRI, in consultation with an NGLC evaluator, then created a list of non-SunBay classrooms in PCS that could be used for matching purposes based on a nearest-neighbor propensity score matching algorithm. The students in these matched classrooms were used as the comparison group for the SunBay students in the analytic models. Once classrooms were selected, SRI, again in consultation with an NGLC evaluator, determined what subscales of the FCAT were most aligned with the SunBay intervention. After reviewing the content of the SunBay Modules and the specific grade level FCAT scales, composite FCAT scores were created for each grade level using percent correct.

An analysis was then run to compare the FCAT scores of classes that were exposed to SunBay to classes that were not. An HLM analysis model was used to compare FCAT subscale composite scores for SunBay and non-SunBay classrooms within the same course and grade level (e.g., 8th grade, Algebra 1). The model nested students within classrooms and schools. Prior FCAT scores were used as a covariate.

A summary of the results is shown in Figure 5, which shows the courses in decreasing order of effect sizes. The description of the course includes the grade, the relative FCAT scores of that course compared to other courses in that grade, and the course name.

**Figure 5.** Effect sizes and 95% confidence intervals for classrooms exposed to SunBay



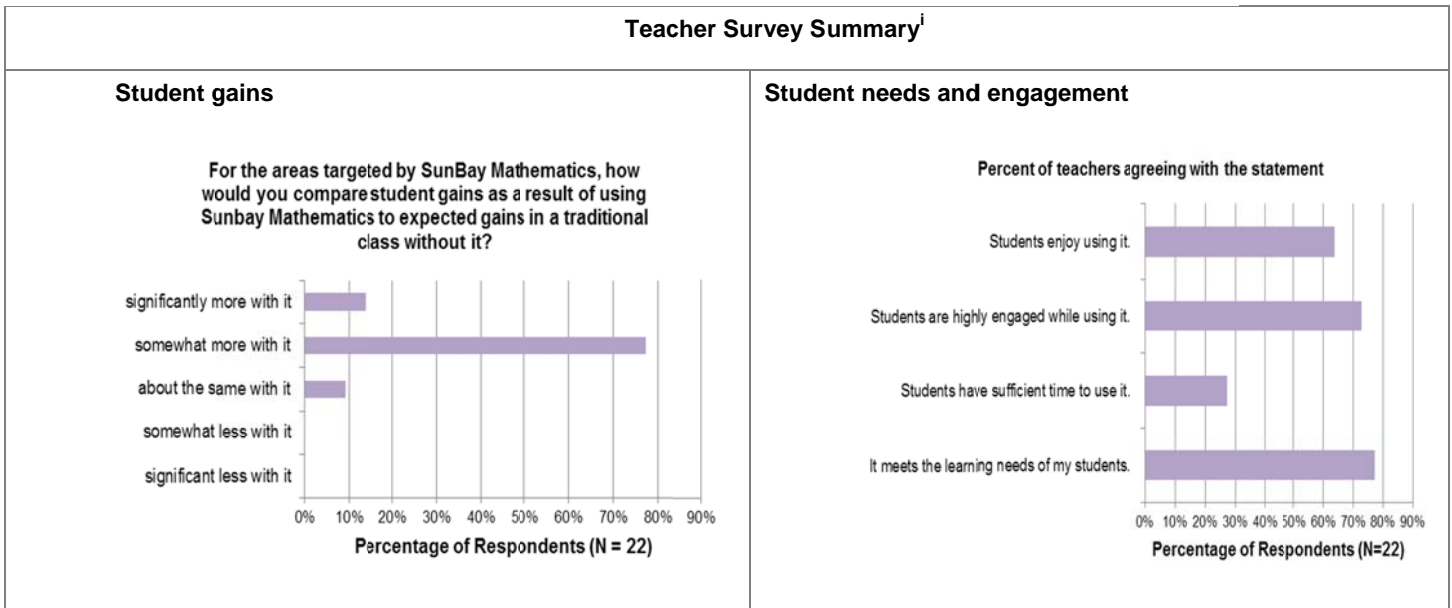
A summary of the evaluation is:

- The materials have high effect sizes for low, medium, and high performing classes.
- Of the 9 courses, 8 have positive effect sizes for SunBay.
- The probability of 8 positives results out of 9 total classes happening by chance is .03.

That is, there is evidence that the materials are effective in the aggregate.

The following caveats apply:

- The findings are from an underpowered quasi-experimental post-hoc analysis.
- The intervention only included a small number of units, whereas this i3 proposal includes the use of more units, and over a longer period of time.
- The intervention was not designed with the intent of increasing FCAT scores, and SunBay is directed at higher-level mathematics content and practices than is found on the FCAT.



## Impact

*“Sun Bay Mathematics showed students how to look more deeply into a concept and think about the math instead of just looking for a formula or shortcut. They felt challenged by the work but were able to complete it, so their confidence was raised as a result of Sun Bay Mathematics.”*

*“The students were able to experience the nature of functions and graphical representations of covarying <sic> data. There was a direct connection/correlation to the expectations of their grade level and FCAT.”*

*“It did not have a big impact. My students did not enjoy using it. They thought it was boring.”*

## Recommendation

*“I would only recommend SunBay to other teachers if there were changes in the units. The information and ways that students learn are great, but it took way too much time out of our year and it was difficult to do the unit successfully.”*

*“It is an excellent visual to help develop certain math concepts. After manipulating computer activities, students end up with deeper understanding of certain concepts.”*

*“The dynamic technology helps bring the math to life for students.”*

## Challenges

*“School-based availability of computers.”*

<sup>i</sup> The teacher data reported in Figure 6 and in the comments below were collected and analyzed independently by an external evaluator contracted by the Gates Foundation for the evaluation of the Next Generation Learning Challenges Grant project which provided funding for SunBay in 2011-2012.







# Middle School Reform Efforts

**CHRISTINE SEMISCH**

K-12 Subcommittee

October 8, 2013

“Educating today’s  
students to succeed  
in tomorrow’s world”

- > **6<sup>th</sup>** largest school district in the nation
- > **262,000** students from **171** different countries and speaking **53** different languages
- > **233** schools within the District
- > **175,000** adult students
- > **10%** of Florida's student population sits in a Broward County Public School classroom



[browardschools.com](http://browardschools.com)







## Middle School STEM Programs

- > **School-wide STEM Learning; programs at six middle schools**
- > **Over 200 hours of targeted professional staff development including STEM Summer Academies**
- > **Partnership with Florida Atlantic University College of Engineering and Computer Science**
- > **Participation in local and national STEM or STEM related competitions**



[browardschools.com](http://browardschools.com)



## **Digital 5-8: Pathways to Personalized Learning**

- > Implementation of personalized learning environment for students
- > One to one student computer adoption initiated in 27 of our district's 5<sup>th</sup> grade classrooms this school year
- > Digital resources and a learning management system to monitor and respond to student mastery of standards
- > Next Steps.... continue to expand to additional elementary schools and their feeder pattern middle schools



[browardschools.com](http://browardschools.com)





- > **Information Technology Academy: Sponsored by Broward County Public Schools in collaboration with Broward College and Citrix Solutions**
- > **LEEO Program: Ensures students are proficient in the necessary skills to earn Middle School Industry Certification**



# Linking Education and Employment Outcomes (LEEO)

To Prepare Students For Post-secondary

Employment in High Tech Fields



[browardschools.com](http://browardschools.com)



# ALGEBRA READINESS DISTRICT STRATEGIC GOAL

- > **Alignment to the District's Strategic Plan: To increase Algebra readiness and proficiency by 8th grade)**
- > **Middle school Algebra: Increase participation and at the same maintain a high level of Algebra proficiency**

	2012	2013	2014
<b>Middle School Algebra Student Participation</b>	4,453	5,523	6,258
<b>EOC Algebra Performance</b>	96% Passing Rate	95% Passing Rate	N/A



> **BCPS Credentialing Program:**  
Grounded in the New Teacher  
Center's formative assessment  
system

> **Program Components:**  
Professional Learning, Professional  
Goal Setting, Case Studies, and  
Data of Coaching Practice



## Coach Credentialing Program



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**Educating today's  
students to succeed  
in tomorrow's world.**



**Broward County  
Public Schools**







## THE ANSWER TO THE END-OF-COURSE EXAM

For Florida's middle and high school students, the Algebra End-of-Course exam is as high stakes as it gets – it determines their future. To propel students to success on the End-of-Course exam, the University of Florida Lastinger Center has joined forces with the Florida Legislature to deliver **ALGEBRA NATION** – a free, interactive, intensive, 24/7 e-learning End-of-Course exam preparation resource.

Responding to Gov. Rick Scott and the Florida Legislature's challenge to universities to champion STEM education, **ALGEBRA NATION** has been helping tens of thousands of students around the state unlock the door to success by giving them access to some of Florida's best math teachers and a host of highly effective e-learning resources. Available free to all Florida children, **ALGEBRA NATION** provides them with direct support from the state's flagship university.

Based on the latest research and best practices, **ALGEBRA NATION** utilizes social learning and technological breakthroughs to stage a vibrant, blended online system for students, teachers and parents. This intuitive, around-the-clock resource offers differentiated instruction through live and asynchronous tutoring, as well as a host of other tools that drive learning. UF professors have dissected the End-of-Course exam and aligned **ALGEBRA NATION** with the most-current state standards.

**ALGEBRA NATION** is equally powerful for teachers. At a time when they are being evaluated on their students' standardized test scores, they need targeted supports, particularly when it comes to the End-of-Course exams. **ALGEBRA NATION** is the answer.

Teachers choose to participate and share their approaches on this platform. They utilize it as part of their lesson plans and assign it as homework. Their students gravitate to it because it offers a convenient, social way to learn algebra and receive differentiated instruction from some of Florida's top teachers and study experts. Thus, learning in the Sunshine State becomes a dynamic, multidimensional social process – inclusive, non-linear, hands-on, energizing, effective and fun.

Helping Florida's students master the End-of-Course exam is what **ALGEBRA NATION** is all about. Built by teachers for teachers, **ALGEBRA NATION** provides a powerful resource for all students and educators in the Sunshine State.

## ALGEBRA NATION COMPONENTS

**Video Content Review Sessions:** Effective and entertaining **ALGEBRA NATION** videos help students ace the exam. UF professors and master teachers have configured the content into bite-size chunks, which they've organized by concepts. The videos feature nationally renowned study experts – young, energetic pros – and dynamic algebra teachers from throughout Florida. Students choose to follow one or more of them. For instance, one instructor offers swifter versions of the videos; another serves up a slower approach for students who need to drill down on particular concepts.

**Algebra Workbooks:** UF distributes these workbooks for free to any algebra teacher in Florida. Students use their workbooks to practice problems, each of which is paired with a thoroughly outlined video solution.

**Interactive Algebra Wall:** Students ask any and all questions 24/7 on this online wall and receive answers from peers and teachers. Study experts monitor the interactions in real time, reading every thread to ensure the accuracy of peer replies. The UF platform creates a social learning environment that makes students feel free to ask even the simplest questions – questions that they may feel embarrassed to ask in class. The discussions they spark and the answers they elicit are simultaneously individualized yet universal.

**Accessible On All Devices:** Delivered through a web-based platform, **ALGEBRA NATION** is available on all devices, including iPhones, iPads, iPod Touches and Android phones/tablets. Students type their questions and answers on a desktop, laptop, tablet or smartphone and draw graphs with their mouse or finger. They also take photos of their work with their smartphones and post them instantly on the Algebra Wall.

**Assessment System:** UF utilizes an online assessment system that helps students identify areas of learning and leads them to the resources to conquer the learning objective.

**Personalized Learning:** This learning environment allows teachers to individualize instruction as students work independently. Instruction is targeted and personalized, allowing students to move ahead as they demonstrate mastery of the material. Conversely, students who struggle can work at their level as they too master the new material.

**Blended Learning:** UF constructed **ALGEBRA NATION** as a blended learning resource that can be used as a pure online system or in a hybrid fashion that includes students working online and teachers using the system in the classroom. Thus, **ALGEBRA NATION** extends learning into the home, providing support to students when they most need it.

**Communities of Practice:** Students receive points for answering their peers' questions on the Algebra Wall and for posting questions as well. This badgering, coupled with the opportunity to show their mastery of the material, motivates many students to participate. This, in turns, helps the answer-givers sharpen their knowledge, as well. By helping others, they perform better on the End-of-Course exam.