

SREB

*HIGH SCHOOLS
THAT WORK*

MAKING MIDDLE
GRADES WORK

Opening Doors to the Future:

*Preparing Low-achieving
Middle Grades Students to
Succeed in High School*

Southern
Regional
Education
Board

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Goals for Education

1. All children are ready for the first grade.
2. Achievement in the early grades for all groups of students exceeds national averages and performance gaps are closed.
3. Achievement in the middle grades for all groups of students exceeds national averages and performance gaps are closed.
4. All young adults have a high school diploma — or, if not, pass the GED tests.
5. All recent high school graduates have solid academic preparation and are ready for postsecondary education and a career.
6. Adults who are not high school graduates participate in literacy and job-skills training and further education.
7. The percentage of adults who earn postsecondary degrees or technical certificates exceeds national averages.
8. Every school has higher student performance and meets state academic standards for all students each year.
9. Every school has leadership that results in improved student performance — and leadership begins with an effective school principal.
10. Every student is taught by qualified teachers.
11. The quality of colleges and universities is regularly assessed and funding is targeted to quality, efficiency and state needs.
12. The state places a high priority on an education *system* of schools, colleges and universities that is accountable.

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Improving schools are trying new approaches to raise the achievement of struggling students

By Gene Bottoms

Many schools in the Southern Regional Education Board's network of high schools and middle grades schools are refusing to "give up" on their struggling students. Instead, educators are trying and revising various approaches to help low-achieving students stay in school and achieve at higher levels.

This publication contains descriptions of efforts in 15 schools to address systemic change needed to help students move successfully from the middle grades to high school. The strategies include summer schools for incoming ninth-graders; multi-year programs in the middle grades to accelerate achievement; double doses of English and mathematics in grade nine; programs that provide extra help and extra time; academies and small learning communities of students within a school; a special school to prepare ninth-graders for high school; and assignment of the best teachers to plan and lead the transition initiative.

Transition from the middle grades to high school is an important aspect of a continuous, comprehensive school-improvement effort. The purpose is to help more students succeed in college-preparatory academic courses in high school and prepare for challenging postsecondary education, careers and lifelong learning. In working with schools, *High Schools That Work* has identified practices that school leaders can implement to accelerate achievement, especially for students who traditionally have not been expected to make much effort in school.

Components of an effective transition system

- **Continuous planning with teacher involvement.** Many schools use study teams of teachers and school leaders to plan and revise their transition initiatives. The teams focus on using data to understand students' deficiencies and on employing proven practices to close achievement gaps. They study what other schools have done to develop effective transition programs. When schools have an organized approach to transition, teachers will support helping students to learn essential academic concepts. Most schools look at student achievement to measure progress in order to make needed changes in their initiatives.
- **Working together to bridge communication gaps.** Transition initiatives involve middle grades and high school leaders and teachers paying attention to instruction and working together to bridge communication gaps from one school to another. The teachers focus on:
 - ◆ helping middle grades students, parents and teachers understand the rising expectations of high school;
 - ◆ communicating clearly what students need to know and be able to do in English language arts, mathematics and science to do challenging high school work; and

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- ◆ following up on the course failure rates of ninth-graders to determine what the middle grades and the high school can do to increase success.
 - **High expectations for students who are performing below grade level.** Successful schools set high standards, upgrade the curriculum and expect all students to do at least grade-level work. **These schools have found that struggling students will never meet grade-level standards unless they are taught to those standards, given challenging assignments and expected to perform at that level.** Successful schools help students do higher-level work and require them to redo work, stay after school to complete unfinished homework, and get extra help if they are not meeting grade-level standards.
 - **Beyond drill sheets — engaging students in challenging and meaningful assignments.** Successful schools have learned that students’ assignments must be challenging, meaningful and engaging. Such assignments require more teacher planning and greater use of real-world problems and lessons that teach academic knowledge and skills.
 - **Extra help and extra time to meet high standards.** Teachers at effective schools make it known that they believe students can do high-level work; students at these schools believe their teachers will be available to help them meet high standards. **Many schools have discovered that extra-time and extra-help programs work best when teachers assist students in mastering the content and standards formerly reserved for the “best” students.** This help often occurs in out-of-school time.
 - **Telling students and the community the truth.** Many schools tell parents the truth about the level of effort the school and the students will have to make to get students to meet at least grade-level standards. It is important to emphasize with parents the necessity for students to be better prepared to meet higher standards in high school. Successful schools help parents understand their role in getting students to meet higher standards. Parents must be willing for their children to spend additional time at school as needed to catch up.
 - **Flexible scheduling.** Some students may need longer blocks of time to master rigorous content. Successful schools see a flexible schedule as a resource and take steps to give students more quality learning time.

Strategies for an effective transition system

- **Using an interdisciplinary approach to accelerate low-performing middle grades students.** George Fox Middle School in Pasadena, Maryland, uses an interdisciplinary approach that combines academic studies to make learning more meaningful for students. Northwest Rankin Middle School in Brandon, Mississippi, has had success with a two-year interdis-

ciplinary program for students in grades seven and eight. Teacher teams at Pickens Middle School in Pickens, South Carolina, teach small groups of seventh-graders.

- **Summer schools for middle grades students.** Summer sessions prevent loss of learning for at-risk students and give them a head start on the coming school year. A program for low-performing seventh- and eighth-graders at Margaret Brent Middle School in St. Mary's County, Maryland, provides extra help and time, a different type of instruction and a way to help close the gap between their achievement and state standards.
- **Summer programs for incoming ninth-graders who are below grade-level standards.** POLYTECH High School in Woodside, Delaware, requires all incoming ninth-graders who have scored well below state standards on the eighth-grade assessment to attend a special summer program that emphasizes mathematics and reading. Tri-County Regional Vocational Technical School in Franklin, Massachusetts, organized a summer academy to help incoming freshmen raise their academic skills and adjust to the expectations of high school.
- **Jump-start programs for ninth-graders.** Freshmen at South Grand Prairie High School in Texas take a special 12-week course to get off to a good start in the first semester of high school. Taught by the school's best teachers, this course is reducing the number of freshmen who are retained.
- **Teacher support teams.** Rockcastle County High School and Rockcastle County Middle School in Kentucky work together on a year-long support program for eighth-graders considered to be at risk of failure or dropping out. The support class for at-risk students at Lemon Bay High School in Englewood, Florida, is showing results in terms of retention and achievement.
- **Academies and small learning communities.** Small groups of students are organized into academies or schools-within-schools taught by teachers who are qualified and motivated to help students succeed at a higher level. Bok High School in Philadelphia organizes urban students into small learning communities where they receive intensive instruction in English and mathematics. The freshman academy at Henry County High School in Kentucky focuses on English, mathematics and science.
- **Double doses of English and mathematics.** Ninth-graders at Orangeburg-Wilkinson High School in South Carolina take double doses of English I and Algebra I.
- **Special schools to prepare students for high school and beyond.** Separate buildings or spaces for ninth-graders allow freshmen to focus on their academic studies in the first year of high school. The Scott County Ninth Grade School in Georgetown, Kentucky, has its own administrators, teachers and counselors to build students' academic and personal skills in the critical first year of high school. Memorial High School in Texas is a school for ninth- and 10th-graders.

Actions districts and schools can take to begin a transition program

- **Establish a middle-grades and high school transition study committee.** The district can charge middle grades schools and high schools to work together to improve transition between the middle grades and high school.
- **Conduct a needs assessment.** Determine how many students are failing in grade nine, which courses they are failing and which level (honors, regular or basic) has the highest failure rate. Find out how many students are leaving grade eight unprepared to succeed in college-preparatory-level courses — Algebra I, honors English and science. What are middle-grades educators doing to acquaint students and parents with rising high school requirements? What process are high schools using to place students in higher-level or lower-level academic courses in grade nine? Which teachers are assigned to teach challenged students in the middle grades and the ninth grade? What is working for other schools in improving transition between the middle grades and high school?
- **Develop a plan.** Base the school's plan on strategies that work in helping students make the transition from the middle grades to high school. Upgrade the curriculum, adopt a more flexible schedule, provide professional development, organize the faculty to facilitate the plan, communicate with students' parents, and determine how students will move through the transition program.
- **Implement the transition program.** Involve the “best” teachers — ones who know their subject matter, know how to engage students in completing challenging assignments, and believe most students can succeed in algebra, high-level English and college-preparatory lab-based science courses. Give these teachers enough time to work together on curriculum and instructional planning.
- **Review, evaluate and revise the transition program.** Ask the transition committee to meet regularly to review progress and to adjust the plan as needed. Give continuous oversight to the program. Decide which data to collect at the end of the first year to see what is working and what is not working. Develop a plan for analyzing and applying the data in the second year.
- **Provide professional development.** Administrators and teachers need to know how to develop and operate transition programs. Make it possible for leaders and teachers to learn from their peers by visiting schools that have effective transition programs. Allow teams of teachers to identify their own professional growth needs in helping students learn at a higher level and support these teachers in completing their personal staff development plans.
- **Provide special funding for transition programs.** School boards need to allocate funds to support the transition program. Special funding will be needed to operate summer school programs; to provide transportation to summer school, after-school programs and Saturday sessions; and to extend the school day and the school week to provide extra time and extra help. Some funding will be needed to support teachers as they provide special tutoring for low-achieving students in out-of-school time.

I encourage you to read the examples in this publication and to contact the schools' spokespersons for more information. Not all of these schools have comprehensive transition programs, but all of them have components that will fit into a total program for raising student achievement. Because each school is committed to improving its transition program, you may discover that current efforts have moved far beyond the descriptions in this publication.

Gene Bottoms is senior vice president of the Southern Regional Education Board and founding director of High Schools That Work.

The information in this publication was gathered in telephone interviews with leaders and teachers at schools that were selected through written reports provided to SREB. The fact that a school is included in the publication does not mean that an SREB representative visited the school to collect information, although SREB staff did observe in many of the schools. The schools furnished the data cited in the publication and neither SREB nor a third party has reviewed the data sources.

Getting Students Ready for High School _____

A number of middle grades schools are beginning to identify students who may not be ready to do high-school-level work by the end of grade eight. They are taking steps to raise the performance of these students to grade level and to prepare them for success in high school courses. The steps include:

- enrolling students into accelerated academic courses and providing extra help and time for students to meet standards at the basic and proficient levels;
- getting teachers to work together to plan integrated lessons that engage students in completing challenging assignments;
- involving teachers in planning an enriched summer school curriculum aimed at closing the gap between student achievement and state standards; and
- educating students and parents about the level of work required to succeed in high school today.

Interdisciplinary approach helps eighth-graders improve their scores on state tests

Using a special curriculum to raise achievement

- George Fox Middle School's scores on the state assessment of eighth-graders jumped significantly after the first year of an interdisciplinary curriculum and the state recognized the school for improved performance.
- The high school commended the middle school for improving students' readiness to enter high school. The high school principal said students from George Fox Middle School were the best ninth-graders his staff ever had received.
- Since implementing the interdisciplinary curriculum, the middle school has had fewer suspensions, expulsions and referrals "to the office" for inappropriate behavior.

A special interdisciplinary curriculum for eighth-graders at George Fox Middle School in Pasadena, Maryland, was so successful in its first year that the high school principal praised the middle school's efforts. He called the students who completed the program the best group of ninth-graders his staff ever had received.

George Fox Middle School is in a suburban blue-collar community near Annapolis in Anne Arundel County. The school has 860 students in grades six through eight.

Students are selected for the interdisciplinary curriculum based on below-average academic performance, past failure and/or risk of failing again. There were 44 students enrolled in 2001-2002.

“Many of these students had been struggling in regular classes,” said Kevin Dennehy, principal at George Fox Middle School. “When they realized they weren’t going to be able to keep up, they began to shut down.”

Now these students are involved in and receptive to learning, Dennehy said. “The academically inviting environment encourages them to achieve at a higher level.”

Integrated academic learning

Students who are grouped in the program take two academic classes per day. One class integrates mathematics and science; the other blends language arts and social studies. Each class lasts an hour and 45 minutes. Students take electives for the remainder of the school day.

The academic classes are taught by teachers who volunteered to work with these students. Cathi Chisolm teaches the mathematics/science class, and Karen Muir teaches language arts/social studies (U.S. history). Lynn Evans, the school’s special education teacher, is an integral part of the teaching team.

“The teachers in this effort are among the best,” said Dennehy, who has been the school’s principal for six years. “They have been given the freedom to integrate the curriculum and to make their instruction relevant and authentic. Student-centered learning is the focal point.”

Dennehy, who was a special education teacher for 12 years before becoming an administrator, understands how to motivate students to learn. “The right kind of teacher working with a small number of students can create a positive environment for students who have been at risk of failing,” he said.

Twice the planning time

The two academic teachers meet every day during a double planning period. They plan integrated lessons, solve problems and discuss students’ progress. “We reinforce what each of us is teaching,” Chisolm said.

Everything in the two classes is aligned. The teachers are consistent in what they teach, how they teach and what they assign.

“The students know what is expected of them and are not confused,” Chisolm said. “It is important for students in this type of program to have clear expectations. [They need to] know what constitutes acceptable work.”

Muir has taught social studies for three decades. She enjoys in-depth work with a group of students. “This type of class gives students an opportunity to shine,” she said. “Students who get lost in other classrooms feel ‘safe’ speaking in front of the class and making mistakes.”

Reading and writing in social studies

Muir always has incorporated reading and writing into social studies, and the integrated, longer class gives her plenty of opportunities. After the Sept. 11, 2001, tragedy, the George Fox students wrote letters to persuade others to contribute to a fund to buy school supplies for children in Afghanistan. They also wrote letters to senior citizens asking them to compare Pearl Harbor with the events of September 11. “These projects allowed the students to see real-life applications of history,” Muir said.

She also uses the whole block of time if students are “getting into” a project. For example, if the students are writing poetry in language arts, they may continue working into the time set aside for social studies.

Students in the language arts/social studies class were assigned to read and evaluate three books from the Maryland Book Awards list and write letters to the authors. They took a field trip to the Smithsonian Institution and used computers to create brochures based on the exhibits.

Project-based learning

Two projects illustrate how integrated learning and cooperative learning have helped to improve the achievement of eighth-graders who needed a boost. Students applied concepts from all four subjects in working together on these projects.

Creating travel brochures — Students were studying the weather in science and U.S. geography in social studies when they were asked to become “weathermen.” First, they prepared and presented forecasts for different regions of the United States. Then they created “travel brochures” using PowerPoint presentation software. The teachers specified information — such as the region’s history and climate — that they wanted the students to include in their presentations.

“The students learned a lot about the United States,” Chisolm said. “Their writing skills improved, and they got accustomed to working in groups.

“This project counteracted many of the negative feelings that these students had about school. Some students who had never before made the honor roll did so in the first and second grading periods. They were thrilled — and so were their parents.”

Doing income taxes — Students were assigned to small groups, and each group was given background information on the number of people in a fictional family and the family’s total income. Each group was assigned to study an Internal Revenue Service chart to figure the tax rate and to determine the family’s after-tax income. The students then prepared budgets for their hypothetical families. They used their knowledge of mathematics to present the information in graphs and their knowledge of finance from social studies to prepare the budgets.

“I’m a tough teacher, and sometimes the students don’t like me,” Chisolm said. However, students seem to appreciate her strictness after they reach high school. “They tell me how proud they are and how well they are doing in high school as a result of this program.”

Higher performance

Data show that these students thrive on this type of instruction. “Our scores on the state assessment of eighth-graders jumped significantly after the first year of the program, and we were recognized by the state for our efforts,” Dennehy said.

The state recognition in 1998 and 2000 was based on improved performance on the Maryland School Performance Assessment Program (MSPAP), which is given each May to the state’s third-, fifth- and eighth-graders. The tests measure the performance of Maryland schools by illustrating how well students solve problems cooperatively and individually, how well students apply what they have learned to real-world problems, and how well students can incorporate knowledge from different subject areas.

“The academic progress of these students is reflected in their report cards,” Dennehy said. “Some students have made the honor roll for the first time in their lives.”

The positive attitude promoted in the program has led to fewer suspensions, expulsions and referrals “to the office” for inappropriate behavior, the principal said.

The program’s benefits have extended beyond the students who participate in it. The eighth-graders who take regular classes flourish because their teachers can spend more time helping them with their learning needs and can move through material at a quicker pace.

The students who need extra help are not always separated from their peers, however. For example, a project on the Civil War involved all eighth-graders.

The program has been regarded as a success by the students who participate as well as by their parents. “We invite parents and younger siblings to attend an end-of-year celebration, during which students show off their work,” Muir said.

Dennehy is so pleased with the students’ progress that he hopes to expand the program to grades six and seven when the school begins using a flexible, four-period block schedule in 2002-2003.

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Two-year interdisciplinary program advances students' achievement several grade levels

Giving students a boost by 'looping' grades seven and eight

- At the end of the first year, the mathematics achievement of seventh-graders at Northwest Rankin Middle School had risen from the 5.5 grade level to the 8.6 grade level. The reading achievement had climbed from the 7.1 grade level to the 9.6 grade level.
- Similar advances took place in grade eight, where students' mathematics scores rose from the 5.6 grade level to the 7.9 grade level and their reading scores jumped from the 7.3 grade level to the 10.1 grade level.
- During year two, students' scores grew 3.1 grade levels in mathematics achievement. The growth over a two-year period totaled 5.7 grade levels.
- During the fall semester of the first year, 58 out of 65 students received grades of "incomplete." However, only two students were not promoted to the next grade at the end of the second semester. Teachers believe that requiring students to do quality work to meet higher standards convinced students that the school was serious about raising performance and accounted for the significant change in student behavior during the second semester of the first year.

Northwest Rankin Middle School is a large suburban school that serves a very diverse population of students in grades five through eight. Located in Rankin County just east of Jackson, Mississippi, the school enrolls 1,425 students.

Students come from families ranging from two-income, college-educated families to single-income families in which the breadwinner dropped out of school in the middle grades. Seventy-eight percent of the students are white, 19 percent are black, and three percent are from other demographic backgrounds. Fifteen percent of the students qualify for free or reduced-price lunches.

The school traditionally has programs for gifted students, accelerated students and special-population students. Until recently, there was no program for the pocket of students whose educational needs were not being addressed adequately. These are students who demonstrate academic potential yet fall short in academic achievement.

Failing or barely passing

Some of these underserved students have failed one or more grades, but most of them are barely passing from grade to grade. Others perform extremely well through teacher-directed instructional activities and make good grades but consistently score in the lower quartile on standardized tests.

By the time these students reach the middle grades, their educational deficiencies override their educational achievements and they become very frustrated. Students in this situation often lose their belief in the value of learning.

Northwest Rankin Middle School has created a team of teachers who are determined to identify these students and to provide an educational environment for academic success. The team uses assessments to pinpoint students' strengths, weaknesses and potentials for learning at a higher level.

Team of teachers

The team that began the program called itself Team WilBur (a combination of the first letters of their last names). The teachers are Cynthia Wilkins, who taught mathematics and science, and Malinda Burke, who taught language arts and social studies.

The team's philosophy is simple: All students can learn. By showing students their strong points and helping them learn missing skills, the team convinces students that they are smart and that they can learn.

The centerpiece of the program is a skills-focused integrated curriculum that teaches critical thinking skills — the thing that often is lacking when students fall behind in the middle grades and high school.

Initially, the team selected students based on their most recent scores on the Iowa Tests of Basic Skills (ITBS). Students whose mathematics scores reflected a deficit of two or more years (Stanine 3 or 4) were the first to be identified. Of those students, the ones with a deficit of two or more years in reading were given the opportunity to participate in the curriculum.

Evaluating achievement

During the first few weeks of the school year, students selected for the program complete a learning style inventory, the computerized STAR mathematics test for evaluating students' progress, and portions of the Woodcock Diagnostic Reading Battery (WDRB). Students' scores on these tests established a baseline and indicated what students knew and what they needed to know so that the team could develop appropriate instruction.

Since the tests indicated that 72 of the 73 students learned best by doing, the team developed highly interactive, student-focused lessons instead of a lecture-based approach. The Accelerated Math software program was chosen because it allows for individualized instruction. Likewise, the language arts curriculum addresses students' personal abilities and interests.

The team meets daily to discuss matters such as students' progress, new instructional approaches and content alignment. The members use this time to schedule student presentations and to talk with parents by phone, by e-mail or in person. They also share skills — such as new technology and reading instructional strategies — with each other.

One grade to another

The team “loops” or moves up with the students from the seventh grade to the eighth grade. The idea of “looping” is to develop a strong, supportive academic atmosphere in which students discover the value of learning.

Teachers develop students’ reading skills through use of Mastering Reading Through Reasoning. The lessons are straightforward and purposeful. Time at the beginning of each lesson is spent teaching students how to ask effective questions and how to anticipate how their behavior will affect their success in school and in life.

During year two, the teachers use Perfect Copy, a computer software program for teaching core writing skills, including grammar, word usage, mechanics and editing. When proofreading written materials, students in the first nine weeks can have “all clues.” As they move into the three other terms of the year, they have access to “more clues,” then “some clues” and finally “no clues.” As a result of having “no clues,” students increase their note-taking, use of the dictionary and research into the rules of correct grammar.

Integrated projects and field trips

Students complete four integrated projects per year, which they present at Parent Night in each nine-week term. The focus alternates between science and social studies. The science projects incorporate writing and the social studies projects include mathematics and science.

Teachers take every child in the program on field trips, even though these students often are the ones that disqualify themselves from school trips because of poor behavior, grades or attitudes. All of the field trips relate to the curriculum and all students must complete a project or activity after returning to school. This policy holds teachers and students accountable for the content of the trip.

Grading students’ work

Students’ academic grades are kept separate from their “time management” grades. Students receive full credit for academic work that they complete. They are not penalized for turning in good work that may be late. The team discovered that this practice results in significant differences in how students see themselves and their academic skills.

All work must be completed. If not, the student receives a grade of “incomplete.” The student does not receive an actual grade average until all of his or her assignments have met the requirements. The administration supports this grading policy to the extent that other teachers in the building are implementing the same practice. Parents recognize that failure to complete assignments is a major reason for their children’s lack of success in school and are wholehearted supporters of the plan.

In the fall semester of the 2000-2001 school year when the grading policy took effect, 58 of 65 students received grades of “incomplete.” By the end of the school year, only two students were not promoted to the next grade.

Students have opportunities to earn extra points. For example, if a student asks a “thought-filled” question in class, puts extra effort into a written assignment or a project, or shows unusual insight into a topic, the teacher awards extra credit “on the spot.” Students are quick to recognize when they or their peers have contributed something to a lesson.

Exceptional progress

There are no secrets in this program. All students know where they started, how far they have progressed, and how far they still need to go.

By the end of the first year (2000-2001), the average mathematics achievement of seventh-graders rose from the 5.5 grade level to the 8.6 grade level. The average reading achievement of these students climbed from the 7.1 grade level to the 9.6 grade level. Similar advances took place in the eighth grade, where students averaged an increase in mathematics scores from the 5.6 grade level to the 7.9 grade level and an advance in reading scores from the 7.3 grade level to the 10.1 grade level.

In the second year (2001-2002), students made a 3.1 grade-level jump in mathematics. The total mathematics growth for students who were in the program for the complete two-year cycle was 5.7 grade levels.

“The key is to teach in different ways and to encourage students to take risks in their thinking and learning,” Wilkins said. “This program is about teaching students to learn when they have had neither fun nor success in learning in the past.”

The Rankin County School District supports the concept of continuous learning from grade to grade. Northwest Rankin Middle School has begun a fast-track program to accelerate the learning of fifth- and sixth-graders and Northwest Rankin High School is looking at starting a ninth-grade academy to help students adjust academically to high school.

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Middle grades students find success in a small-group environment

Focusing on a small group of challenged students

- Only two of the at-risk students who were placed in a small-group learning environment failed for the year, compared with 20 students from larger groups of seventh-graders.
- Discipline problems for students in the small group declined 75 percent over the previous year.

During spring 2001, administrators at Pickens Middle School in Pickens, South Carolina, decided to create a small group of students within the upcoming seventh-grade class. The action was necessitated in part by the large number of students expected to enroll during the 2001-2002 school year and in part because of school leaders' conviction that low-performing students would benefit from special attention to their critical needs.

Current seventh-graders were being taught by two five-teacher teams consisting of 140 students per team. The 2001-2002 seventh-grade enrollment was expected to be 340. That meant that each team of teachers would have 170 students — an increase of six students per class!

The administrators made plans to create a third team that would have only three teachers. This team would serve a maximum of 60 students. The program became known as the "S-Cubed Team — Students Seeking Success."

Low-performing students

Fifty-seven students who scored the lowest among rising seventh-graders on South Carolina's Palmetto Achievement Challenge Test (PACT) were selected to be in the group. These students were also deficient in attendance, academic performance, organizational skills, conduct and/or motivation.

"We chose the three teachers carefully," said Rick Evans, assistant principal. "We realized from the beginning that they would need to believe that all children can learn. They would need to love children and to balance understanding and patience with toughness and resourcefulness."

The team of teachers met the criteria. A special education teacher at the school — who was certified in English language arts — volunteered to teach reading and writing. "She understood where these children were coming from and what they needed," Evans said.

The mathematics teacher was a student favorite. He coached girls' volleyball and was noted for being able to get students to give 110 percent, on and off the court. He also volunteered from the current staff.

The science teacher was new to the school but was a veteran teacher. She looked forward to the challenge of working with struggling students.

Three goals

The team's goals were to provide appropriate and challenging instruction, to engage students in hands-on learning activities in the school and the community, and to increase each student's confidence and achievement. The students took pre-tests in mathematics and English language arts to provide clear pictures of their performance levels.

The three teachers did a great job of preventing students from thinking they were assigned to a "different" group. They took the students on field trips and entered their work in writing and mathematics competitions — activities just like those of the other seventh-graders. In an essay contest sponsored by the governor of South Carolina, one girl in the class earned lunch with Governor Hodges in recognition of her writing ability.

Service learning was a special focus of the class — partly because of the school's commitment (Pickens Middle School is a National Service Learning Leader School) and partly because working on projects in the community is a good way for students to "learn by doing" and to develop leadership skills.

This group of seventh-graders participated in a community-wide effort to build a "Playground of Promise" at the city park. The students learned communication and mathematics skills as they spread mulch, painted walls, dug holes to "plant" old automobile tires as playground equipment, and completed many other tasks while working on the project. They made sure all of their activities deserved the label "first rate" and beamed with pride when others at the school and in the community asked about their involvement in building the playground. Some of the students were so determined that they dug up tires that had already been placed in the ground because the old tires weren't straight enough to meet the students' standards.

Fewer failures, better behavior

School records indicate that placing low-performing students in a special group where they can receive added attention is paying off. Only two students failed for the year, compared with 20 students from the other seventh-grade groups. Behavior improved dramatically. Discipline problems in the group were cut 75 percent in the first year! One girl who had been sent to the principal's office more than 20 times in the previous year made only one trip to the office while studying with the special team.

This approach to helping students achieve at a higher level in the middle grades and eventually in high school has been so successful that it is being expanded to all three grades at Pickens Middle School in 2002-2003. The purpose is to strengthen students' academic and personal skills and their confidence in working with others.

“We are proving to these students that they can perform at a higher level,” Evans said. “They have been downtrodden for so many years that it is important for them to believe that they can do things like anyone else.”

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Failure not an option in summer program for middle grades students

Building a bridge to challenging high school studies

The summer program at Margaret Brent Middle School helps students advance in reading, writing and mathematics. Eighty-eight seventh- and eighth-graders signed up in 2001; 64 completed the program.

- Eighty-nine percent of students in the program made passing grades in reading and 82 percent made passing grades in mathematics. The others were told “not yet” and received special help during the following school year.
- At the end of the summer, 32 students took the Maryland Functional Tests, which are required for graduation from high school. Ten students passed the mathematics portion.

A few years ago, students who failed courses at Margaret Brent Middle School and needed to attend summer school had to go outside the county. Then, in 2001, the Maryland State Department of Education provided funding for the district to create a summer school program for middle grades students. The result was the Summer Bridge Program, which gives students extra help and time, a different type of instruction, and a smoother transition between the middle grades and high school.

About one-third of the students who took the Maryland Functional Tests passed the mathematics portion after building their math skills in the Summer Bridge Program. These students

previously had little hope of succeeding on the mandatory test, which students must pass in order to graduate from high school.

Margaret Brent Middle School is in St. Mary's County, Maryland, a rural community about 60 miles southeast of Washington, D.C. Most of the more than 900 students are from working-class families in which both parents have jobs. Twelve percent of the students are minorities, 13 percent are eligible for free or reduced-price meals, and 14 percent are enrolled in special education.

The school and the high school into which it feeds, Chopticon High School, joined SREB's Making Schools Work network for middle grades and high schools in rural areas in 2001. Both schools follow the MSW key practices, which call for changes in curriculum and instruction in order to accelerate the achievement of students in grades six through 12.

The summer program for seventh- and eighth-graders was a blessing for Margaret Brent leaders and teachers, who recognized a growing need to help students with academic and behavioral problems. There was a two-week reading academy that served about 20 sixth-graders with poor reading skills, but there was no program for students struggling in other academic areas.

Chopticon High School had a summer program for students who failed high school courses, but many students in the middle grades needed help before they entered high school. The Margaret Brent summer program would bridge the gap between eighth grade and ninth grade.

The summer-school staff includes a lead teacher, language arts teachers, mathematics teachers, a school counselor, a media specialist, a clerical assistant and a school nurse. There are 12 students per teacher.

Selecting students

A team of an administrator, a counselor and teachers review students' performance on state tests, scores on standardized tests and grades on report cards. Based on the team's recommendations, students are either "required" or "recommended" to attend summer school. Those who are required to attend have failed two or more academic subjects and/or failed at least one of the Maryland Functional Tests. Students are recommended to attend if they have failed one academic class and received D's in several other academic classes. (Many of these students also have failed at least one of the Maryland Functional Tests.)

The five-week summer program focuses on reading, writing and mathematics; it also includes character education and daily physical activity. Students attend the program four days a week for four hours a day. The schedule is divided into three time blocks: two periods of an hour and 45 minutes for academic studies — one for reading and writing and the other for mathematics — and a 30-minute activity period called Project Adventure, which concentrates on team-building.

Reading and writing

Teachers use the Summer Success: Reading program to organize the reading and writing block into four instructional periods: guided reading, strategic writing, vocabulary development, and self-selected reading. The program engages students in reading, writing, listening and speaking. Students use a computer program that connects guided reading with topics in science and social studies textbooks. As part of this program, students use the Internet to do research and then organize the information to demonstrate what they have learned.

Strategic writing focuses on expressing ideas, informing and persuading. The students draft, revise, discuss, edit and publish their work. They also increase their vocabulary.

In self-selected reading, students choose reading materials based on their interests and reading levels, evaluate their own reading skills and help to set reading goals for themselves.

Mathematics instruction

Teachers use Summer Success: Math as their primary program. It includes group learning and individual practice. Teachers integrate technology into the lessons and get students to complete tasks that demonstrate their learning. Almost every day, students spend time in the computer lab, where they solve problems electronically that are related to their mathematics lessons.

Students are asked to meet higher expectations by using a pre-algebra book rather than a general mathematics textbook. Many students feel that what they are learning is more important because it is the basis for algebra. The instructional materials are different from the ones used during the school year. If students have been unsuccessful with general mathematics books, it makes sense to try new materials to engage them in learning.

Project Adventure

Students are encouraged to participate in various activities and challenges that require trust, strategy, cooperation and leadership. Many activities are simply good fun and engage students in vigorous physical activity.

Using technology

Teachers enhance reading and mathematics instruction through highly interactive, individualized computer studies. Colorful graphics and computer animation make learning academic concepts more enjoyable. Teachers print reports to give students immediate feedback on their progress.

Grading scale

Students in the summer program receive grades of A, B, C or “not yet.” Any work that is marked “not yet” must be redone until it merits an A, B or C. Students receive weekly progress reports and final report cards at the end of the program.

Guidance and advisement

The school counselor is an important resource for students in the program. She helps them improve their organizational, study and social skills and meets with them weekly to set goals. The counselor monitors the progress of students who are required to attend summer school to help them complete the program successfully.

Parental involvement

Participation by students' families is an important part of the summer program. Students, parents and teachers sign participation agreements that outline what is expected of them. Parents are expected to enroll students who need the program and to send them to school daily. They are encouraged to visit the school, meet with the teachers, reinforce skills, attend events and serve as volunteers and/or mentors. Parents also receive newsletters to notify them of upcoming events.

Results of the program

Of the 88 seventh- and eighth-graders who were signed up for the program in 2001, 70 attended and 64 completed the program. Fifty-five percent of the students had perfect attendance.

Eighty-nine percent of the students received A's, B's or C's in reading, while 11 percent were told "not yet." In mathematics, 82 percent earned A's, B's or C's, while 18 percent were told "not yet." No students were retained. Instead, they received extra help during the following school year.

At the end of the summer, 20 eighth-graders and 12 seventh-graders took the Maryland Functional Tests. Six eighth-graders and four seventh-graders passed the mathematics portion. The eighth-graders had received remediation during the school year in addition to the help from the summer program. The eighth-graders who failed the test will be offered remediation in high school.

"In the future, our summer program will focus more on getting seventh-graders ready for the Maryland Functional Tests and on building eighth-graders' mathematics skills in order to prepare them for challenging courses in high school," said Principal Cathy Wiggins.

Next steps

Leaders at Margaret Brent Middle School were planning to expand the summer program in 2002. They decided to open the program to sixth-graders as well as seventh- and eighth-graders and to incorporate high school teachers. They also were planning to offer more transition activities to prepare eighth-graders for high school and to move these students into a freshman academy at Chopticon High School when the school year begins.

“We wanted the experience to be positive rather than punitive — and it worked,” Wiggins said. “When we told the students that failure was not an option, it changed the dynamics of what could have been just another summer program.”

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Smoothing Transition from Middle Grades to High School

The passage of students from the middle grades to high school is the most difficult transition point in education. The failure rate in grade nine is three to five times higher than that of any other grade. Leaders and teachers from a number of middle grades schools and high schools are working together to help students make the transition into challenging high school courses. These schools are doing a better job of orienting students and parents to high school and helping them prepare for the challenges of the ninth grade and beyond.

Building success through the Keystone program

Telling ninth-graders the truth about what counts in high school

- The percentage of students passing the Texas Assessment of Academic Skills (TAAS) mathematics test in grade 10 rose from 75 percent in 1997-1998 to 89 percent in 2000-2001.
- The percentage of South Grand Prairie High School students recommended for higher-level graduation plans increased from 4 percent in 1998-1999 to 57 percent in 1999-2000.
- Sixty-nine students took Advanced Placement exams in 1997-1998; a total of 346 students took AP tests in 2000-2001.
- The Keystone program for ninth-graders has been a driving force in changing the culture of the high school and enrolling more students in an accelerated program of study.

Five years ago, the top 10 percent of students at South Grand Prairie High School in Grand Prairie, Texas, were successful in academic and extracurricular activities. Another group of students got all the negative attention, but the school had a strong discipline policy to deal with them.

The rest of the students were in the “middle majority.” Student surveys and the state’s Academic Excellence Indicator System showed that many of these students were uncommitted and unfocused. As a result, the school received only an “acceptable” rating.

About 100,000 people live in Grand Prairie, a suburban community between Dallas and Fort Worth. Of the 2,530 students at South Grand Prairie High School in 2001-2002, 42 percent were white, 31 percent were Hispanic, 20 percent were African-American, 7 percent were Asian and less than 1 percent were “other.” Twenty-three percent of the students are considered to be at risk of failing or dropping out.

Doing things differently

In 1997, a group of South Grand Prairie High School teachers and administrators recognized that doing what they always had done would continue to bring results they didn’t want. They decided to organize all students into small learning communities based on five career themes: business and computer technology; creative and performing arts; communications, humanities and law; health science and human services; and mathematics, science and engineering. There would be no “smart” academy or “not-so-smart” academy. All students would benefit from a goal-oriented, career-focused program.

Two new courses

The faculty realized that the transition to ninth grade was a critical step for all students, not just at-risk students. The mantra became, “If you want to change your school, you had better begin with the freshmen.” The staff added two new courses at critical transition points: a “keystone” course for ninth-graders and a “capstone” course for juniors and seniors.

Capstone is open to juniors in the spring semester and to seniors in the fall. The course helps students to focus on their goals for after high school and to shore up their studies in the senior year. Students do independent research, develop personal portfolios and interact with community leaders, who provide insights and guidance about life after graduation.

Every ninth-grader takes Keystone in the first semester of high school (12 weeks). By monitoring and supporting students from the first day of high school and by putting the best teachers on the “front lines,” school leaders hope to reduce the number of freshmen who have to repeat the grade and to raise the achievement of all students.

Keystone enables the school to help at-risk ninth-graders without labeling them or separating them from other students. The course is a way to get every student off to the right start and to ensure that every student has the right attitudes and study skills.

Motivating busy teachers

Finding teachers for the new courses was a challenge, but the school developed a strong recruitment campaign to motivate busy teachers to teach one or two sections each of Keystone in the fall. The teachers needed to believe in the program and to participate fully.

Because only five teachers volunteered to work with Keystone in the first year (summer 1997), courses had to be offered every semester in order to accommodate every freshman. The next year, additional teachers joined, and every ninth-grader took the course in the first semester. In 2001-2002 there were 17 Keystone teachers, including two of the original five. Teachers do not have to teach more than one section unless they want to.

Keystone includes three weeks of orientation to the course, the school and the staff. Students are asked to introduce themselves to the principal or an assistant principal and to shake his or her hand. These introductions are important because they put every student in face-to-face contact with an administrator.

Orientation also is a time for students to learn about clubs and activities and to take “field trips” on the school campus.

Learning real-life skills

During the next six weeks, students learn to communicate, manage time and set goals — skills that will help them in high school and beyond. They learn that “excellence is a habit.” The principal and assistant principals visit classrooms to talk about their own lives and personal aspirations.

During the last three weeks of Keystone, students explore career possibilities and set educational and career goals. They work on their programs of study, and teachers and guidance counselors encourage them to enroll in honors courses. Guidance counselors monitor and update students’ academic plans throughout high school and provide copies to parents when they attend student/parent/counselor meetings.

The last days of Keystone are very busy. Seniors share with ninth-graders what they would do differently if they could do it all over again, and the freshmen visit a nearby college for Think College Early Day.

Everyone associated with the Keystone program promises to “be there” for the freshmen until they graduate. Thus, the program does for all ninth-graders what the parents of the top 10 percent of students do for their children: provide focus, monitor progress, support higher achievement and make learning relevant to students’ lives.

Raising achievement

Efforts to give all ninth-graders a good start and to support them academically throughout high school are paying off. In 1997-1998 (the first year of Keystone), 75 percent of 10th-graders passed the Texas Assessment of Academic Skills (TAAS) mathematics test. In 2000-2001, 89 percent of 10th-graders passed the test. In 1997-1998, 69 students took Advanced Placement exams; in 2000-2001, 346 students took those tests. Even though the emphasis on academics increased, attendance remained at 95 percent between 1997-1998 and 1999-2000.

The Texas Education Agency recognized South Grand Prairie High School in 1999-2000 for the school’s large one-year increase in the percentage of students who completed one of two higher-level graduation plans: the Recommended graduation plan and the Distinguished Advanced Placement (DAP) graduation plan. The school abandoned the state’s lowest-level graduation plan and began to enroll students in more rigorous courses. The Recommended and the DAP graduation plans include more courses in mathematics, English and foreign languages. The percentage of South Grand Prairie High School students recommended for the two higher-level graduation plans rose from 4 percent in 1998-1999 to 57 percent in 1999-2000.

Keystone's academic success has made it popular with students, parents and teachers. One student said: "My take-it-as-it-comes attitude has changed. You have touched my life forever!" One parent wrote: "Thank you for nurturing my daughter to reach higher and do better. Thank you for insisting that students strive to be all they can be." A teacher said, "It's the most rewarding thing I've ever done — and the hardest!"

Leaders and teachers at South Grand Prairie High School see the Keystone course as a work in progress. They welcome input from students, parents and teachers as they refine the program and improve instruction. Two additions to Keystone are the Character Counts character-education program and a program based on Sean Covey's book *The 7 Habits of Highly Effective Teens*. Keystone and other academic teachers are working together in more and better ways, guidance services are expanding into grades 10 and 11, and students are connecting with the community in order to experience various career options.

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Ninth- and 10th-graders get a school of their own

Focusing on grade nine in the summer and during the school year

Failure rates declined in the first year by:

- 50 percent in English;
- 51 percent in science;
- 53 percent in social studies;
- 21 percent in students failing one course;
- 48 percent in students failing three courses; and
- 61 percent in students failing four or more courses.

When two large Victoria, Texas, high schools merged in fall 2000 to become an even bigger school, it was obvious that many ninth-graders at the new Memorial High School would need special help to stay afloat. The new school had 4,100 students; the freshman class alone had 1,100 students.

Data from 1999, when the Victoria Independent School District decided to consolidate the two schools, showed that 28 percent of all ninth-graders at those schools were being held back. This percentage was much higher than the statewide average of 17 percent. The following year, 34 percent of all ninth-graders were held back. What was happening?

More students were struggling and failing in ninth grade because of increased graduation requirements that went into effect while the two schools were merging. The number of credits that ninth-graders had to earn to become sophomores rose from five to six. Fewer freshmen were meeting the requirements for promotion to 10th grade.

Two goals

Some form of intervention clearly was needed. Given a year to plan for consolidation, Principal Gary Wrinkle set two goals for the new school's first ninth-grade class: fewer ninth-graders repeating the grade and fewer dropping out of school.

Wrinkle did his homework. He attended conferences and workshops on the transition into ninth grade and collected information about the "best practices" to help ninth-graders succeed in high school.

The principal could see that many students entering ninth grade were not prepared for the responsibilities and the freedom that they encountered in the upper grades. He decided to use the *High Schools That Work* key practices as the school's framework for getting and keeping

students on the right track. The key practices require schools to raise standards; enroll all students in challenging programs of study; involve students, parents and teachers in educational and career planning; and provide students with extra help to complete an upgraded curriculum.

Two campuses

Wrinkle found it difficult to motivate teachers, students and parents who were loyal to different schools. There were many questions about — and some resistance to — consolidation. With the support of the superintendent and district administrators, Wrinkle developed a plan to house ninth- and 10th-graders at one of the former schools and 11th- and 12th-graders at the other.

Everyone expected many changes, and one of the major changes was block scheduling. Even though one of the high schools already was following a block format, Wrinkle met with teachers from both former schools to familiarize them with the schedule and to seek support from department heads. He explained that the double-period classes in a block schedule can be used to deliver more academic learning to ninth-graders.

Based on the belief that the ideal high school has 300 to 900 students, Wrinkle implemented a “house” concept. Ninth-graders are organized into three heterogeneous groups of about 350 students each. Each “house” has a leadership team comprising an assistant principal, a counselor and a lead teacher.

Lead teachers serve as adult role models for students, whose lives often lack such positive influences. Each lead teacher spends one class period per day teaching in a content area and the rest of the day monitoring students’ academic progress and need for extra help. The lead teachers support other teachers in their instruction, and they motivate and encourage students to meet higher standards.

A parental liaison works with ninth-graders’ parents to improve school attendance. The liaison hosts monthly sessions for parents and maintains communication between the school and families. The school staff also includes a counselor to help students deal with drug, alcohol and family problems.

Summer academy

Memorial High School’s efforts to ease the transition for ninth-graders include a summer program, which gives 200 incoming ninth-graders a head start. In the first year, 120 spaces were reserved for students at risk of failure who were invited to attend. Academically successful students had to apply for the other spaces in the program. This combination of students proved to be a healthy mix.

The Summer Success Academy is open from 8 a.m. to 1 p.m. Monday through Friday for five weeks. The two classes — one in health and one in teen leadership — both incorporate mathematics and language arts skills. Students earn one-half credit in each course, for a total of one high school credit.

The teen leadership course focuses on creative thinking, public speaking, interpersonal skills and time management — skills that support students' academic success in high school and beyond. Students visit a local college and participate in a ropes course to learn teamwork and leadership skills.

The program allows students to miss no more than three days. In the first year, 187 students missed fewer than three days; in the second year, 196 students completed the five-week program without missing three days.

The program's success has received attention from high-ranking state officials. Two students who completed the summer program and excelled in high school were selected to introduce Texas Gov. Rick Perry when he visited Memorial High School in 2002 to discuss his statewide plan to improve education and prevent dropouts.

School-year programs

Memorial High School works throughout the school year to improve student achievement by holding students to higher standards and offering several extra-help programs. Each campus has a homework center — staffed by academic teachers and college interns — where students can seek help after school four days a week. Teachers also tutor students in their classrooms after school.

Students who are failing Algebra I at the end of the first semester are required to start over in the second semester. This fresh start gives them extra time to master the fundamental concepts.

Data from the 2000-2001 school year showed that Memorial High School's ninth-grade transition plan was working:

- Failures in ninth-grade English declined by 50 percent.
- Failures in science were down 51 percent.
- Failures in social studies decreased by 53 percent.
- The number of students who failed one class dropped by 21 percent.
- The number of students who failed three classes was down 48 percent.
- The number of students who failed four or more classes declined by 61 percent.

Committed to higher achievement

"These figures are very encouraging," Wrinkle said. "Although too many freshmen are still failing, many ninth-graders have improved, and the teachers and administrators are committed to making more progress in the future."

The ninth-grade leadership teams know that everything cannot be done at once. Their next step toward improvement is to add features to the transition program. The leadership teams are developing career pathways — called academic concentrations — that will be offered for the first time in 2002-2003. Mentoring and advising periods are under consideration.

Memorial's mathematics and science teachers work with their counterparts from grades six through eight to align the curricula and to improve the transition from the middle grades to high school in these subjects. English and social studies teachers will form subject-area teams with middle school teachers in 2002-2003.

Memorial wants the community to support higher achievement by students and would like area colleges to get involved in aligning the curriculum from kindergarten through post-secondary education.

The transition program is a work in progress. Wrinkle and his staff expect continued improvement each year.

"We don't have all the answers," he said. "We know we're taking risks, but we've done our homework and we believe the risks are minimal. We will make some mistakes and we will do some things right. But we are willing to share our experiences and our data honestly so that others can learn from our mistakes as well as our successes. More importantly, we will have a program in place that will help young people succeed."

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Special program helps at-risk students 'cross the road' from middle school to high school

District efforts yielding positive results

- Freshmen in 2001-2002 improved between five and eight points in all categories of Kentucky's Comprehensive Test of Basic Skills (CTBS).
- The district has made progress in reducing the percentages of students who fail courses in the first year of high school. The percentages have shown steady decline — from 26 percent of ninth-graders in the first semester of 1999-2000 to 15 percent in the first semester of 2000-2001 and 12 percent in the second semester of 2000-2001.
- Absences were cut almost in half — from 1,916 in the first semester of 1999-2000 to 1,093 in the first semester of 2000-2001.
- The number of discipline referrals dipped from 328 in the first semester of 1999-2000 to 222 in the first semester of 2000-2001 and to 199 in the second semester of that school year.

Students, parents and the staff at Rockcastle County High School and Rockcastle County Middle School in Kentucky recognize that all incoming freshmen are “at risk” when adjusting to high school life. In October 1999, a committee of staff and parents from both schools developed a plan to address the problem of transition from the middle grades to high school. They called the plan Crossing the Road.

The district has seen improvement in ninth-graders' grades, attendance and behavior. In 2000-2001, freshmen at the school gained between five and eight points in all categories of Kentucky's Comprehensive Test of Basic Skills (CTBS). The percentage of students who failed courses in the first year of high school dropped by more than half.

The Rockcastle County School District is located in southeastern Kentucky 60 miles south of Lexington. The district enrolls 3,000 students in kindergarten through grade 12. This total includes more than 800 students at the high school and more than 700 students at the middle school. Sixty-five to 70 percent of the district's students qualify for free or reduced-price lunches.

Crossing the Road is a year-long support program for 50 eighth-graders considered most at risk of failure or dropping out. A transition team of middle grades and high school teachers identifies students' subject-area weaknesses and designs a week-long summer program and year-long after-school sessions focusing on academic and social adaptation to high school.

When members of the transition team met in the 1999-2000 school year, they examined some startling data on freshmen. They found that 23 percent of the 245 ninth-graders in 1998-1999 failed one or more courses. The percentage increased to 26 percent of 220 students in the first semester of 1999-2000.

Large numbers of students were absent, tardy or unruly. Forty-seven percent of freshmen in 1998-1999 had 10 or more absences during the year. That was reduced to 31 percent with 10 or more absences in the first semester of 1999-2000, but the number was still too large.

There were 462 discipline referrals in 1998-1999 and 328 in 1999-2000. Students were absent 2,876 times and tardy 1,046 times in 1998-1999. All of these problems were hindering students' adjustment to high school and impacting their achievement.

Crossing the road

The Crossing the Road support system enables the district to:

- identify and target for intervention the eighth-graders who are most likely to fail in the ninth grade;
- improve instruction in the middle grades and high school to help ninth-graders succeed in high school; and
- provide time for teachers from the middle grades and the high school to meet together to identify gaps in each student's knowledge, comprehension and application of learning and to develop instructional strategies to accelerate learning among at-risk students.

The key components of Crossing the Road are:

Step-up night — Each spring, eighth-graders and their parents meet with the high school staff to learn about high school courses, registration and scheduling.

Freshman registration — Teams of eighth-graders, accompanied by their teachers, visit the high school to register for the coming year. The high school principal, the guidance counselors and the academic advisers greet the students; the middle school teachers and the freshman advisers help them register for ninth-grade classes.

Shadowing at the high school — The principals and the youth services directors from the high school and the middle school arrange for all eighth-graders to visit the high school in small groups during the spring semester. The future ninth-graders spend time in high school classes and meet with teen leaders. They record the experiences in their journals and share what they write with teachers and other students.

Summer program — Targeted students attend a week-long "Bridges" program at the high school in the summer before the ninth grade. They take academic classes taught by ninth-grade teachers and learn study skills, time management and career awareness. They receive copies of the student handbook and find out about school procedures, student organizations and extra-curricular activities. The classes are offered in 90-minute blocks like the schedule that these students will follow for the first time in high school.

Orientation day — Rising ninth-graders and their parents participate in this special event during which they receive schedules for the fall semester, review individual graduation plans with the students' academic advisers, receive copies of the student handbook and the academic planner, and tour the building to find assigned classrooms. The day ends with a picnic for students, parents and the high school staff.

Academic follow-up and support — Each Wednesday after school, high school teachers are available to tutor freshmen. Teachers refer students who need the extra help, but all ninth-graders are welcome to attend. Freshmen participate in field trips and enrichment activities as part of the Crossing the Road program. In one activity, they prepared and presented a PowerPoint and video presentation of the high school to an audience of eighth-graders.

Positive results

The Crossing the Road program is making an impact on student achievement in Rockcastle County. Ninth-graders are showing improvement in their grades, attendance and behavior. Freshmen in 2001-2002 improved between five and eight points in all categories of Kentucky's Comprehensive Test of Basic Skills (CTBS).

The district has made progress in reducing the percentages of students who fail courses in the first year of high school. The percentages have shown steady decline — from 26 percent of ninth-graders in the first semester of 1999-2000 to 15 percent in the first semester of 2000-2001 and 12 percent in the second semester of 2000-2001.

Freshmen take the following required courses in a 4 x 4 block schedule: English I; Algebra I and Data/Measurement or Integrated Mathematics I and Data/Measurement (some ninth-graders complete Algebra I in the eighth grade and take Algebra II in grade nine); Introduction to Physics/Space Science; Global Issues; Health; and Physical Education.

Absences were cut almost in half — from 1,916 in the first semester of 1999-2000 to 1,093 in the first semester of 2000-2001. The largest decline was among students with 10 or more absences. Thirty-one percent of students were in this group in the first semester of 1999-2000. The percentage has dropped steadily — from 21 percent in the first semester of 2000-2001 to 16 percent in the second semester of that school year.

The number of discipline referrals dipped from 328 in the first semester of 1999-2000 to 222 in the first semester of 2000-2001 and to 199 in the second semester of that school year.

Student survey

Ninety freshmen were selected at random in February 2001 to complete a survey about the ninth-grade transition program. They were enthusiastic about their experiences in Crossing the Road. One student said, "Last year, I was on the verge of failing, but I earned a 3.25 GPA in the first semester of high school." Another student said, "The tutoring sessions helped me raise my grade from a D to a B." Students said the shadowing experience made them feel "less scared" and the summer program showed them exactly what would be expected and encouraged them to make better grades.

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At-risk freshmen get boost from academy

Providing intensive instruction in grade nine

The “pullout” academy model at Henry County High School appears to work for 60 percent of the freshmen who are the least prepared to enter high school. It equips these students to succeed in a mainstream high school curriculum.

The 11 students (out of 19) who completed the semester academy program of study performed like “regular” students: They passed their courses, earned credits and moved on toward graduation. Specifically, these students:

- earned credit for pre-algebra during the second semester of ninth grade;
- earned C’s or higher in science in the second semester and passed biology successfully in grade 10; and
- passed English in the second semester.

Graduates of Henry County High School’s first freshman academy donned caps and gowns to accept their diplomas. Parents, teachers, administrators and local school board members attended the graduation ceremony, which was the first celebration of its kind for some students.

Henry County High School is in a primarily agricultural area of north central Kentucky. Forty percent of the school’s 620 students are eligible for free or reduced-price lunches.

In the late 1990s, school leaders and teachers noticed that incoming ninth-graders increasingly lacked the knowledge and skills to tackle high school courses and to meet higher standards. For example, 81 percent of ninth-graders whose academic performance had indicated they were “at-risk” failed at least two core classes at Henry County High School in 1997-1998. Sixty-seven percent of these at-risk students did not meet the requirements to be sophomores. Only two of the 36 at-risk ninth-graders passed all of their classes.

“We had a large group of freshmen who just weren’t keeping up,” said Cheryl Gilley, a counselor at Henry County High School. “Many of them had been unsuccessful in the middle grades and had lost their enthusiasm for school.”

The answer was to create an academy for at-risk freshmen. The academy, which would be housed in a separate building, would provide intensive instruction to ninth-graders who needed special assistance in English, mathematics and science. All classes would be taught by a key group of teachers.

Principal Graham Wied and his team asked Henry County Middle School teachers to identify incoming freshmen who could benefit from the academy. The teachers chose students who were promoted to ninth grade despite poor academic performance and students with histories of disciplinary and/or attendance problems.

Students and their parents attended an open house to learn about the academy and about why they were invited to participate. Nineteen students enrolled in the first academy in 1999-2000.

Participating freshmen “earn their way” into high school by passing at least three of four subjects — English, mathematics, science and career exploration — in the first semester. Students who graduate from the academy take regular ninth-grade classes in English, mathematics and science in the second semester. These ninth-grade classes are taught by the same teachers who helped these students succeed in the academy.

Eleven of the 19 students in the first year completed the academy’s program of study. Of the eight who did not finish, two moved, two entered home schooling, one was moved into alternative education, two were expelled and one was placed elsewhere by social services.

Reading and writing

The academy’s English course emphasizes reading and writing for learning. Because most of the students learn best through hands-on experiences, teacher Lorri Stivers assigns lots of projects. In one activity, she cuts a story into “sentence strips” and asks the students to reassemble the story. Students identify elements such as transitional statements as they strengthen their reading and writing skills.

The students enjoy writing poetry and studying drama. As they learn the spellings and meanings of new words, students relate the words to real life.

One year, Stivers’ students collaborated with mathematics and science students to put on a Halloween extravaganza for second-graders. The academy students used fun activities to teach English, mathematics and science to the younger students. “When the academy students realized that they were solely responsible for teaching others, they rose to the occasion,” Stivers said.

Stivers measures students’ reading comprehension before they enter the academy and designs the reading curriculum based on their needs. She provides scoring guides and other study aids to make sure students know what is expected of them. In personal conferences with students, Stivers points out their writing strengths as well as weaknesses. “I don’t allow writing to be the threatening task that students think it is,” she said.

Mathematics

Many academy students struggle with mathematics. Some cannot add and subtract large numbers, much less perform pre-algebra functions.

Melissa Carpenter, who taught mathematics to the first group of academy students, used various hands-on applications. The students designed mathematics-based games, calculated the batting averages of big-league baseball players and estimated the cost of buying a car. They learned fractions by following a recipe and figured the tax and tip on a restaurant bill. Graphing calculators enhanced their learning.

“If I could get their attention with something they enjoyed, they learned the mathematics concepts much faster,” Carpenter said.

Midterm tests revealed dramatic improvements among the academy’s first group of students. The students received credit for pre-algebra during the second semester of ninth grade — their first semester as true freshmen. These students took Algebra I in 10th grade.

Leaders at Henry County High School believe the way to teach mathematics to struggling ninth-graders is to show the relationship between the concepts and students’ lives and constantly to “breathe down their necks,” said school counselor Gilley.

Science

Science teacher Steve Dent began by testing the first group of academy students to determine their strengths and weaknesses. The test he used was the previous year’s ninth-grade science final.

“I found out which science concepts most of the students needed and what it would take to bring all of the students up to grade level,” Dent said.

Dent makes science exciting by taking it out of the classroom. In one project, his students gathered leaves and classified trees on the school grounds. In another project, students watched the movie “October Sky” to learn about early space exploration; they then built and launched miniature rockets.

“I challenge the students to do better,” Dent said. “I don’t let them slack off.”

The results from the first group of academy students were impressive. All of the students passed the course. It was the first time some of them had passed science. These students took and passed biology in 10th grade.

Career explorations class

Students are encouraged to learn about the many career paths available. Teachers invite professionals from various fields to visit the academy to describe their careers and to answer students’ questions.

The academy also held a “reality fair” that featured career advice from representatives of local businesses and the county cooperative extension service.

The right schedule and teachers

The school uses a block schedule, which makes classes longer. Gilley said that the academy benefits from this type of schedule. “Longer classes make it easier for students to become involved in hands-on activities that the teachers assign.”

The right teachers also are important to the academy. “We found teachers who wanted to help these students,” said Wied, the principal. “The instructors are devoted to what they are doing.”

Academy teachers have the same planning period and meet several times a week to develop integrated lessons and to discuss students’ progress.

Strong support from parents and school leaders

The superintendent and the assistant superintendent are enthusiastic supporters of the academy. They provide financial support for field trips and equipment, visit the classrooms, and encourage teachers and students.

Parents receive weekly updates on their children’s progress and participate in conferences with teachers and students every nine weeks.

“The response from parents has been overwhelming,” Gilley said. “Some parents say their children like school for the first time in their lives. We haven’t had a single complaint from a parent.”

The academy is working

The first group of academy students performed well in the second semester of ninth grade. All academy graduates earned C’s or higher in science in the second semester. All but one of the students passed English in the second semester.

The school recently looked at how the academy students are doing compared with similar students who received no special services and with “regular” students in the same grade.

“The academy students are doing much better than the students who received no intervention,” Gilley said. “They are more like the ‘regular’ students. They are passing their classes, earning credits and moving on toward graduation.”

Henry County High School leaders and teachers used what they learned during the first year to modify the academy schedule. It was apparent that the academy students needed a physical outlet, so the second year of the academy featured health/physical education in the first semester and moved career studies to the second semester. In the third year, students who were not in the academy also participated in the career studies class and ROTC was offered as an alternative to career studies.

A sophomore academy has been established to continue the support begun in grade nine. Students take English, mathematics and science all year during the third and fourth periods of the block schedule. This arrangement allows teachers to spend more time on a certain subject if needed.

Henry County Middle School launched an extra-help program for eighth-graders in 2000-2001. A core group of teachers work with students who are likely to struggle in academic courses in high school. Students are selected to participate in this self-contained program based on their performance in seventh grade. The program is designed to boost their skills and their confidence about learning. Teachers use a lot of hands-on, real-life activities to interest and motivate the students.

All of these focused programs for at-risk students are helping to keep more Henry County students in school and on track to graduate from high school.

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Helping Students Catch Up to High Standards in High School

Schools are offering a range of activities for freshmen who lack the knowledge and skills to do ninth-grade work, complete college-preparatory-level courses and/or meet standards on state or local exams given early in high school. These schools are providing special support classes; special academies or small learning communities for ninth-graders; extra time in mathematics and English language arts; tutoring before, during and after school; and mandatory summer school attendance for students who score “well below standards.”

Students select a school that helps ninth-graders meet high standards in English and mathematics

Assisting freshmen during the summer and the school year

A summer program for incoming freshmen and a year-long emphasis on reading and mathematics in grade nine have brought gains in student achievement at POLYTECH High School.

- Incoming ninth-graders who attend the summer program improve their scores when they retake Delaware’s eighth-grade reading and mathematics tests at the end of the summer.
- The percentage of increase in the number of students meeting standards on Delaware’s 10th-grade reading test is much larger for students who take a “double dose” of reading/language arts in grade nine than for other POLYTECH 10th-graders.
- Half of the students who fell “well below” the state standard in mathematics in the eighth grade improved their performance level to “below” average on the state 10th-grade test in 2002 after they took a “double dose” of mathematics in grade nine. Likewise, 47 percent of students who scored “below” average in mathematics in eighth grade and took a “double dose” of mathematics in ninth grade improved their performance to average or above average on the 10th-grade test in 2002.

Students “choose” to attend POLYTECH High School in Woodside, Delaware, but they have no say-so when it comes to meeting high standards. “We make it very clear to students and parents that we demand a lot of hard work but that we are willing to do everything we can to help students succeed,” said Scott Kemerling, supervisor of curriculum and instruction for the POLYTECH School District.

The school's summer program for incoming freshmen and a year-long emphasis on reading and mathematics in grade nine have brought gains in student achievement.

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POLYTECH High School has 1,042 students in grades nine through 12. Some 310 of these students are freshmen. About 90 percent of these students graduate from POLYTECH or another high school at the end of four years. Approximately 17 percent of the students who enter POLYTECH return to their home schools or enroll in an adult education program; another 8 percent transfer out of the county or the state; approximately 10 percent do not complete high school in four years. Graduates average 31 credit hours, including a minimum of 11 credit hours in career/technical courses.

To enter POLYTECH, a student must apply to the school and must pass the eighth grade. Students who qualify are admitted on a first-come, first-served basis, with acceptances beginning in January of the eighth grade.

All freshmen spend a five-day orientation period in each of 21 technical areas. Courses range from the "traditional" construction trades to advanced computer network training. The wide selection of courses allows POLYTECH to serve students' various learning styles and skill levels. A student must apply to take the career/technical "shops" and must create an extensive portfolio that is used in the interview process. Students take the interviews very seriously and 96 percent of them get their first choice of courses.

Acceptance criteria

Two factors affect which students are accepted: 1) No more than 20 percent of freshmen can come from one school district and 2) At least 10 percent of the freshman class must be students who have been identified as special-education students.

The school accepts incoming ninth-graders, regardless of whether they pass the Delaware Student Testing Program (DSTP) tests for eighth-graders. The tests are given in the content areas of reading, writing and mathematics. On a performance scale of 1 to 5, students who score a 1 are considered to be "well below standard" in their performance and in need of "significant improvement." Those who score a 2 are "below standard" and "need improvement."

Level 3 is considered “standard” performance, while Level 4 is “above standard” and Level 5 is considered “well above standard” or “distinguished.”

DSTP results are used to determine whether or not students will be required to have an Individual Improvement Plan (IIP). The results also determine what kind of diploma the students will receive — basic, standard or distinguished.

Summer program

Recognizing the need for immediate intervention with some students, POLYTECH two years ago developed a summer school program for inbound ninth-graders who are “below” or “well below” standard performance in reading and/or mathematics. Students are required by law to attend summer school if they score 1 (well below standard) on the reading and mathematics portions of the DSTP.

Summer school is optional (but strongly encouraged) for students who score 2 on the DSTP tests for eighth-graders. In recommending students for the summer program, POLYTECH leaders look at the courses these students have taken, the grades they have earned and test results for previous years as well as grade eight. If the school does not take action on students who “need improvement,” it is in violation of state law. If parents do not require their children to attend, they are establishing a document trail saying that they are not doing enough to prepare their children for success.

All other incoming ninth-graders can attend the summer program if they want to enrich their academic achievement.

The ninth grade is the doorway to high school and sets the scene for students who will be expected to pass high-stakes state exams in the future. “We want students to score as high as they can,” Kemerling said. “We don’t want anyone to be satisfied with a score of 3, which is standard. We want everyone to aim for a 5.”

Mathematics and reading

In the first two years of the program (2000 and 2001), two-thirds of incoming ninth-graders failed to meet state standards in mathematics, while one-fourth of rising freshmen fell short on the state test in reading. The summer school enrolled 60 percent of the students who needed help in mathematics and 42 percent of the students who needed a boost with reading.

“Students’ scores on the eighth-grade test determine whether they will be called eighth-graders, ninth-graders taking a readiness curriculum, or full-fledged ninth-graders,” Kemerling said. “We are required by law to make those distinctions and to target our services accordingly.”

The summer program lasts 20 days and includes two and a half hours daily on mathematics and the same amount on reading. In the first two years, the classes were taught by career/technical teachers — such as an electronics teacher and a criminal justice teacher — plus social studies teachers. All of these instructors know how to teach mathematics and reading from a different perspective, using real-life applications to make the studies meaningful to career-oriented students.

“These students have been taught in traditional ways for eight years — from the time they entered the first grade,” Kemerling said. “Our teachers use a different approach — and we see some improvement in just 20 days during the summer.”

Higher performance

Students take the DSTP eighth-grade tests again at the end of the summer program. Forty-one percent of the students who scored a 1 (well below standard) in mathematics in spring 2001 improved their performance levels by the end of the summer. In fact, more than 10 percent reached the level of 3 (meets standards). In reading, 35 percent of students who were “below standard” moved up to “meets standards.”

Both the reading and the mathematics curricula for the summer school were developed in conjunction with the Delaware State Department of Education. The mathematics curriculum is a combination of real-world problems, hands-on activities and work sheets that emphasize mathematical concepts. Students are given homework assignments that enable them to practice using the mathematics concepts and skills covered in class. The reading curriculum focuses heavily on reading and writing for learning.

The state provides extra-time funding that school districts can use during the regular school year or in the summer. The allocation is based on the number of students in the district. POLYTECH spends most of its funding on the summer school for ninth-graders.

Dedicated teachers

Teachers are extremely important to the success of the summer program. “We look for teachers who have a passion for turning ordinary kids into extraordinary learners,” Kemerling said. In 2002, the instructional team will include mathematics teachers and special-needs teachers as well as career/technical teachers.

Parental involvement begins when a student is accepted to attend POLYTECH. Parents participate in an open house at the school in November of the eighth grade and talk with teachers during “home visits” starting in January.

“We tell parents that reading is important, mathematics is important, integrated learning is important and homework is an integral part of learning,” Kemerling said. “We say that we expect a lot from our students and that we require students to redo work until it meets standards, to stay after school to do missed homework assignments and to participate in extra-help sessions if their grades are not up to par.”

Freshman orientation

When freshman orientation for students and parents is held in June, school leaders know which students will be required by law to attend summer school and which ones should be urged to attend. Without identifying students in either group, school officials explain what it will take for students to be successful in high school and what happens in summer school. “We tell what it means to score 1, 2, 3 or better,” Kemerling said.

Summer school is only the beginning of assistance for at-risk ninth-graders. Students who scored below performance standards on the state mathematics exam take a “double dose” of mathematics for 86 minutes a day during the first semester. This foundational course is a middle-grades catch-up mathematics course taught in a double period made possible by the school’s 4 x 4 block schedule. In the second semester, the students take an integrated mathematics course that is equivalent to Algebra I.

Ninth-graders who need help in English take a foundational reading course in one semester and freshman English in the other semester — not necessarily in that order. The reading course emphasizes study skills, time management, independent learning and note-taking. Students learn to read passages and demonstrate their skills in analyzing and interpreting what they have read. Teachers recommend students for extra help as needed.

Anytime a student is failing, he or she is required to stay after school an hour and 15 minutes a day once a week for academic coaching in a specific course. If a student’s grade in a course drops below 75 percent, he or she goes to an extra-time session for two and a quarter hours a day twice a week. The extra-time mathematics course is individualized and computer-based. Mathematics teachers are paid to “coach” students who are having difficulty meeting course standards.

Every POLYTECH student has an adviser who sees progress reports for the 10 students in his or her group and notifies parents if their children’s grades begin to dip. The adviser, the student and the parents work out a plan to raise the student’s performance.

Making progress in meeting state standards

The students who scored “below” or “well below” standards at the end of the eighth grade and took “double doses” of mathematics and/or reading/language arts in the ninth grade at POLYTECH caught up with their classmates (those who met or exceeded state standards) in terms of course-passing rates and performance on school exams. Their passing rate in high-school-level courses in grade nine was just as high as that of freshmen who had met the state standards at the beginning of the year.

The 2002 10th-grade DSTP showed that students taking “double doses” of reading/language arts and mathematics in grade nine had made good gains in performance and were closing the gap on other students. The percentage of students meeting standards who had taken a “double dose” of reading/language arts in the ninth grade increased by 38 percent on the DSTP, compared with a 5 percent gain for other POLYTECH freshmen. The percentage of students meeting standards who had taken a “double dose” of mathematics in grade nine increased by 21 percent on the DSTP, compared with a 7 percent gain for the other freshmen.

Fifty percent of students who had scored 1 (well below the state standard) on the eighth-grade mathematics test improved their performance level to 2 or higher on the 10th-grade test in 2002. Forty-seven percent who had scored 2 (below the state standard) in mathematics in the eighth grade improved their performance to 3 or higher on the 10th-grade test in 2002.

As a consequence of POLYTECH's summer program and "double doses" of reading/language arts and mathematics in grade nine, the school has outpaced the state in reading and writing and has kept pace with the state in mathematics on the percentages of students meeting or exceeding state standards on the 10th grade tests. Between 2000 and 2002, POLYTECH made a 5 percent advance in reading scores while the state declined 2 percent. POLYTECH made a 7 percent gain in mathematics scores, compared with the state's less than 1 percent improvement. POLYTECH jumped 20 percent in writing scores, while the state declined almost 1 percent.

Comparison of the percentages of students meeting or exceeding state standards in reading, mathematics and writing at POLYTECH High School and statewide in 2002

	POLYTECH High School	State of Delaware
Reading	82%	74%
Writing	70%	57%
Mathematics	47%	49%

"The key is to have teachers who believe all students can achieve at higher levels and who are willing to change the way they teach," Kemerling said. "If teachers don't have this commitment, they fall into the old habits of tracking and low expectations."

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This school's business is freshman learning

Getting results on the state graduation test

- The percentages of Orangeburg-Wilkinson 10th-graders who meet standards the first time they take the South Carolina graduation test have increased in both mathematics and writing. Only 60 percent of students passed the mathematics portion of the graduation test on the first try in 1995-1996. In 2000-2001, 83 percent passed the first time. The percentage who met writing standards on the first attempt rose from 65 percent in 1995-1996 to 82 percent in 2000-2001.
- The average composite SAT score (combined mathematics and verbal) for the original students in the freshman academy in 2000 was 31 points higher than the average score a year earlier.

Orangeburg-Wilkinson High School in Orangeburg, South Carolina, does many things right — particularly for ninth-graders. Orangeburg-Wilkinson is in a midsize, historically African-American community. More than half (66 percent) of the students qualify for free or reduced-price lunches.

Amid changes in school and district leadership, Principal Sheridan Hamilton and her staff have focused on ninth-grade problems, including a high failure rate, a high dropout rate and rampant absenteeism. School leaders want to provide a safe, challenging environment in which ninth-graders can improve their academic skills.

The principal and her staff attended the *High Schools That Work* Summer Staff Development Conference in the mid-1990s to gather ideas. They decided to visit other *HSTW* sites that were working to smooth the transition into ninth grade.

In fall 1996, Orangeburg-Wilkinson High School launched a freshman academy built on the “four C’s”: challenge, community, commitment and careers.

Since the establishment of the academy, the percentages of 10th-graders who pass the state graduation test on the first try have increased in both mathematics and writing.

Challenge

The academy's primary goal is to steer freshmen toward success in high school and future postsecondary education and careers. Therefore, the first guiding principle is “challenge.” Orangeburg-Wilkinson High School made its academic curriculum more rigorous and raised its expectations.

Ninth-graders are required to complete double periods of Algebra I and English I. They are required to read and write daily and to do challenging homework. Freshmen read at least four full-length novels, a Shakespeare play and two modern American plays. They also write research papers. Working hard to meet teachers' expectations helps students achieve at higher levels.

The percentages of Orangeburg-Wilkinson 10th-graders who meet standards the first time they take the South Carolina graduation test have increased in both mathematics and writing. Only 60 percent of students passed the mathematics portion of the graduation test on the first try in 1995-1996. In 2000-2001, 83 percent passed the first time. The percentage who met writing standards on the first attempt rose from 65 percent in 1995-1996 to 82 percent in 2000-2001.

In the last four years, the retention rate for ninth-graders at Orangeburg-Wilkinson has declined by 3 percent. The average composite SAT score (combined mathematics and verbal) for the original students in the freshman academy in 2000 was 31 points higher than the average score a year earlier.

While freshmen are challenged academically, they also receive support to help them meet higher standards. When the academy opened in 1996-1997, all ninth-graders took a course to learn the personal skills that students need in high school and beyond. The course now offers more individualized attention — something like an adviser/advisee program. It addresses organizational and study skills, career exploration, conflict resolution, drug and alcohol prevention, comprehensive health education and school regulations.

Community

The second guiding principle — community — represents a means of support for students. Because most courses for freshmen meet on the school's first floor, ninth-graders generally remain in a common area. The same cluster of teachers teach all academic courses for freshmen. This environment enables ninth-graders to bond with one another and with their teachers. This feeling of security helps students develop self-confidence, grow and learn.

Students also become involved in the community outside the school through participation in projects to improve their hometown. They work with Habitat for Humanity, assist in cleanup days and take gifts to residents of local nursing homes.

Parents attend school dinners that feature programs on education, careers and health issues. They learn more about the freshman academy and are advised of their children's academic progress. Parents sign pledges to make sure their children attend school each day, bring books home at night, complete homework assignments or review coursework each night, and keep in touch with teachers as needed. Students sign agreements to complete all assignments on time, attend school every day unless they are sick, behave in class and study all subjects each night even though they may not have assignments in all classes.

Commitment

The third guiding principle is commitment. Teachers, guidance counselors and administrators sign written pledges similar to those signed by parents and students. Teachers commit to contact parents (by phone or letter) the first time students misbehave or fail to complete assignments, to give students printouts of grades every two weeks, and to set up tutoring sessions for mornings and afternoons. Guidance counselors promise to help all students work on academic plans, to counsel or refer students when there are problems, and to serve as liaisons between teachers and parents regarding students' performance. Administrators vow to support teachers, parents and students in the educational process; to contact parents when students are suspended for something other than tardiness; and to provide a safe and caring environment for teachers and students.

Careers

The academy aims to help students find purpose and meaning in their high school studies by showing them how what they learn in school connects with careers.

October is Career Awareness Month at Orangeburg-Wilkinson High School. Students spend a day job-shadowing people in careers that interest them and then dress like those people on another day. Students create portfolios containing examples of their work that demonstrate the strengths and skills that promote success in postsecondary education and careers.

Career awareness continues all year. In a more comprehensive job-shadowing project, students prepare personal résumés and lists of job objectives. After the school-to-work coordinator matches each student with a local business, the student and the employer set up a period of time during which the student “shadows” an employee in the workplace.

Students in accelerated mathematics or reading classes are scheduled for 45 days of career education in one of four areas (pre-engineering, pre-law, introduction to business or introduction to health sciences) at the school district's technology center.

By the end of the ninth grade, every student has set a tentative career goal and has planned a high school program of study aligned with that goal.

Lessons learned

Preparing ninth-graders for high school and beyond is hard work. “It took two years to get the program the way we wanted it,” said Philip Harrison, one of the first academy administrators. In fact, school leaders continue to make changes to improve the program.

Abbiegail Hugine, who has been administrator of the freshman academy for the last three years, is proud of several changes to the program:

- Freshmen meet as a class more often, and teachers are more involved in helping students learn.
- There is more professional development — including a mandatory course on classroom management — for teachers involved in the academy.

- The school holds orientation sessions in the spring and summer to increase parental involvement.
- There are more incentives for students to improve attendance, behavior and grades. Students receive certificates, prizes and schoolwide recognition for their achievements.

Teachers and administrators are enthusiastic about the freshman academy. They expect success — one freshman class at a time.

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Summer academy gives ninth-graders a ‘head start’ on high school

Raising achievement on state tests

As a consequence of a summer program, other curriculum revisions in grades nine and 10, and special extra-help and extra-time initiatives throughout the school year, Tri-County Regional Vocational Technical High School has increased the percentages of students passing the Massachusetts Comprehensive Assessment System (MCAS) tests. The percentage of students passing the English language arts test rose from 41 percent in spring 2000 to 69 percent in 2001. The percentage passing the mathematics test grew from 40 percent in 2000 to 65 percent in 2001.

Barbara Renzoni, principal and former academic coordinator at Tri-County Regional Vocational Technical High School, dreamed of giving ninth-graders a “head start.” To achieve that goal, she and other staff members at the Franklin, Massachusetts, school organized a summer academy that helps incoming freshmen raise their academic skills and adjust to high school.

The academy focuses on reading, writing and mathematics — the academic areas that give freshmen the most trouble. Students who participate in the summer program have scored low on entrance tests in the three subjects. They attend the summer program five hours a day, four days a week, for five weeks — a total of 100 hours of extra learning.

Another goal of the program is to acquaint students with the school building and the school’s discipline policies in order to make their first “official” days at Tri-County more comfortable.

The Tri-County School District includes 11 towns. Three neighboring towns from outside the district pay tuition for students whose career/technical fields of study are not available in their own districts. Thirty-eight percent of the nearly 900 students at Tri-County are “special-needs” students.

Testing eighth-graders

Efforts to create the summer academy began in 1997. Eighth-graders took an academic placement test, which Tri-County teachers designed together, in the spring. The school now uses a combination of the Stanford 9 and Massachusetts Department of Education tests to gauge eighth-graders’ achievement.

On testing days (a Saturday in May and a weeknight in June), eighth-graders’ parents attend an orientation program about the summer academy, the school and the support services available to their children. Each three-hour orientation includes presentations by administrators and teachers.

The orientation plays a key role in getting parents to consider sending their children to the summer academy. “It can be difficult for parents to send their children to school during the summer, especially if the students are not required to attend,” Renzoni said.

The placement tests identify students who score at or below the seventh-grade level in English, mathematics or both. English teachers score the reading and writing segments; mathematics teachers score the mathematics segment.

Students are invited to attend

About 70 students each year are invited to attend the summer academy, and at least 40 of them enroll. These students attend classes from 8 a.m. to 1 p.m. Monday through Thursday for five weeks. Free bus service is provided for students who live in the district.

The academy offers classes in reading, writing, mathematics, physical education and nutrition (with an emphasis on how nutrition promotes good study habits). A study skills class was part of the academy until it was added to the freshman curriculum. In its place the academy now offers a class to prepare students for the Massachusetts Comprehensive Assessment System (MCAS).

After modifying the academy schedule several times in the first few years, Tri-County settled on the current schedule. Students take academic courses on Mondays, Tuesdays and Wednesdays and career/technical courses on Thursdays. The students are organized into four sections for the academic classes and two sections for the career/technical classes. They rotate through various career/technical experiences during the first four weeks of the academy.

Integrated projects

Students apply English and mathematics skills to complete career/technical projects, which are determined by academic and career/technical teachers who work together during 16 hours of paid planning time before the academy. Projects have included:

- using fractions, decimals and measurements to adjust recipes;
- using English and mathematics skills to design, write, produce and distribute invitations;
- using mathematics skills and following directions to wire a bedroom lamp; and
- using English skills to write directions for completing a task in a career/technical course.

During the final week of the academy, students review what they have learned and take tests that show teachers how much progress they have made and what additional support they may need in ninth grade.

On the last day of the summer academy, students celebrate their accomplishments. One year they enjoyed a family picnic. Another year they went on a field trip. They receive certificates for completing the program and include items from the summer experience in personal portfolios that some students maintain throughout high school.

Academy teachers

The school begins recruiting teachers for the summer academy by posting job notices in the spring. Teachers are paid through a state academic-support grant. Four teachers are hired to teach reading, writing and mathematics, and four are hired to teach career/technical courses.

Teachers submit their curriculum plans to Renzoni before the summer academy. These plans tell how the teachers will address specific weaknesses identified in the student assessments and how they will integrate academic and career/technical skills.

Renzoni said that the summer academy works to maintain the support and involvement of students' parents.

"Parental support is essential for the academy to succeed," she said. "We send progress reports to the parents midway through the program and call parents if students are not attending class." Students are asked to leave the program if they miss more than four of the 20 days.

Longitudinal study

Tri-County is conducting a longitudinal study of the students who attended the first academy in 1997. (These students graduated from high school in 2001.) Of the 31 students who stayed at Tri-County:

- 28 took high-level English courses;
- nine completed Algebra II or a higher-level mathematics course (many took Accounting I or II); and
- 14 completed college-level science courses, such as microbiology, physics, anatomy/physiology or Principles of Technology (applied physics).

Mary O'Connor, an English teacher who was on the faculty of the first summer academy, closely monitored the original group of rising ninth-graders. "One student found she was academically eligible for the National Honor Society."

Raising achievement on state tests

As a consequence of a summer program, other curriculum revisions in grades nine and 10, and special extra-help and extra-time initiatives throughout the school year, Tri-County Regional Vocational Technical High School has increased the percentages of students passing the Massachusetts Comprehensive Assessment System (MCAS) tests. The percentage of students passing the English language arts test rose from 41 percent in spring 2000 to 69 percent in 2001. The percentage passing the mathematics test grew from 40 percent in 2000 to 65 percent in 2001.

The full impact of Tri-County's initiatives was not evident until 11th-graders who failed to pass the MCAS tests in spring 2001 took the tests again at the end of the first semester of their junior year (December 2001). The percentages of Tri-County students passing the tests increased to 90 percent in English language arts and 77 percent in mathematics.

Tri-County has learned important lessons from its efforts to help struggling students:

- Closing the achievement gap is a long-term process, not a quick fix. Students in the summer academy make strides in achievement, but not all of them catch up to grade level in reading and/or mathematics as a result of the experience.
- Other school initiatives that have begun since 1997 — including a homework center, an after-school program, tutoring and a freshman reading course — have helped the academy improve student achievement.

Partly because of the freshman academy's success, Tri-County added a 10th-grade academy. Rising sophomores who need help are invited to participate in a five-week summer program that focuses on literature, writing, algebra and geometry.

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Urban ninth-graders focus on academic skills in small learning community

Raising standards and getting results

- SAT mathematics and verbal scores are going up at Bok Technical High School.
- Achievement on the written part of the National Occupational Competency Testing Institute (NOCTI) exam given to seniors showed considerable improvement in 2001 over 2000.
- Percentages of students meeting the *High Schools That Work* performance goals on National Assessment of Educational Progress (NAEP)-linked tests showed improvement between 1998 and 2000. The percentages climbed from 12 percent to 56 percent in reading, from 27 percent to 46 percent in mathematics, and from 20 percent to 38 percent in science.

The *High Schools That Work* technical assistance team that visited Edward W. Bok Technical High School in Philadelphia, Pennsylvania, in 1998 found that the school had implemented many *HSTW* key practices. The general track was gone, and students were required to complete an upgraded academic core.

One major challenge remained: establishing a catch-up system for students who enter high school unprepared to meet higher academic standards, especially in mathematics and English.

Bok is a traditional career/technical school in an urban area populated primarily by low-income families. Of the more than 1,000 students in 2001-2002, 81 percent were African-American, 10 percent were Asian, 6 percent were Hispanic and 3 percent were white.

'Ninth-grade problem'

In the past, the school solved its “ninth-grade problem” by sending struggling students to regular high schools for further study. But Bok leaders and teachers wanted to do more to help ninth-graders succeed in high school.

The answer was to establish small learning communities — including one for ninth-graders — to give students a place of their own within the school. The principal would continue to oversee the school and to be responsible for all school activities; a cabinet of administrators, department heads, technology specialists and other leaders would work with the small learning communities to upgrade the academic and career/technical curricula.

Bok has three learning communities, each housed in a different area of the eight-story building. The one for ninth-graders focuses on career exploration. The small learning community for 10th-graders helps them prepare to select career/technical majors, and the small learning community for 11th- and 12th-graders emphasizes technology and trades.

Improving academic skills

The purpose of this organizational structure is to identify students' academic needs and to improve their English, mathematics and science skills in grades nine and 10. Students choose career/technical “majors” for their final two years at Bok. The majors available are business technology, computer-assisted design and robotics, computer technology, child care, home health care, health-related technology, food service and building maintenance.

Each small learning community consists of about 350 students. The teachers are drawn from all academic and career/technical areas, and each small learning community is led by an assistant principal and a department head.

English and mathematics

All English courses are taught to college-preparatory standards, and all students are graded on their assigned homework. They write short papers weekly. Ninth-graders who pass English I in the first semester take a communications class — an extension of the standardized English curriculum — in the second semester. Students who fail English I in the first semester are required to retake it in the second semester.

Students also may spread Algebra I over two semesters if necessary. Other students take both Algebra I and Algebra II or geometry in ninth grade.

In addition to English and mathematics in both semesters, ninth-graders take Spanish in both semesters. They also take world history in the first semester and physical science in the second semester.

Extra help

The small learning communities and the school's extra-help program are vital in making sure that students complete a challenging curriculum. Ninth-graders have access to tutoring before and after school. If they earn D's or F's at the end of grade nine, they must attend summer school to get ready for 10th grade. Summer school offers English, mathematics, science and history courses; students select two of these courses.

Struggling ninth-graders receive help through the Comprehensive Student Assistance Program. When a student becomes part of this program, all of his or her teachers are notified of the situation and are asked to plan special activities for the student. The teachers share their plans with the student and his or her parents and enlist the parents' help in raising achievement. If the student's achievement does not improve within five weeks, the school takes additional steps. These steps may include asking professionals to diagnose and suggest a remedy for personal problems that may be hampering the student's progress.

Teachers meet the challenge

The subject matter in grade nine is a challenge for teachers as well as students. All of the teachers in the ninth-grade learning community volunteered to teach that group of students. However, even knowledgeable teachers who are dedicated to helping freshmen need support in order to make a difference. Bok teachers benefit from a block schedule that gives them time to develop lesson plans, share ideas and solve problems together. Teachers have been trained to provide varied and individualized instruction in the 97-minute periods in order to make optimal use of the block schedule.

Experienced teachers serve as mentors for new teachers, and all teachers participate in staff development, which includes programs at the school, in the district and out of town. Teachers attend conferences and workshops and visit exemplary schools. All teachers completed a four-day staff-development program, Step Up to Writing, on how to teach writing across the curriculum.

Measuring achievement

Bok has adopted many *HSTW* key practices: high expectations; a challenging program of study; teachers who work together; a guidance system that involves teachers, students and parents; and extra help. The school also has made it a priority to monitor progress in raising student achievement. Here are some recent findings:

- SAT scores in 2002 were 8 percent higher on the mathematics portion and 5 percent higher on the verbal portion than they were the previous year.
- Scores on the written part of the National Occupational Competency Testing Institute (NOCTI) exam given to seniors were 40 percent higher in 2001 than they were in 2000.
- Percentages of students meeting the *High Schools That Work* performance goals on National Assessment of Educational Progress (NAEP)-linked tests showed improvement between 1998 and 2000. The percentages climbed from 12 percent to 56 percent in reading, from 27 percent to 46 percent in mathematics, and from 20 percent to 38 percent in science.
- Seventeen students earned the *High Schools That Work* Award of Educational Achievement in 2000. The award is presented to students who meet performance goals in reading, mathematics and science and who complete the recommended curricula in at least two of those subjects.
- Bok High School received a Silver Performance Award from *High Schools That Work* in July 2001 for improving student achievement in all three areas — reading, mathematics and science — between 1998 and 2000.
- As a *HSTW* pacesetter school in 2001-2002, Bok hosted teams from other schools that wanted to observe an urban high school that is raising standards and getting results.

Because Bok students come from all over the city, it is difficult to communicate with all of the feeder middle schools. However, Bok and the middle schools together are aligning the curriculum to ensure high standards and a smooth transition for students moving from middle school to high school.

“We have a commitment to make changes that will benefit our students,” Principal Alfonso A. Sorichetti said. “We will continue to look seriously at the performance data of incoming ninth-graders and will provide support to help all students succeed.”

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School for ninth-graders achieves success one step at a time

Making progress through comprehensive teaching and learning

- Students' scores on the total battery (mathematics, language arts and reading) of the national Comprehensive Test of Basic Skills, fifth edition (CTBS/5) at the end of grade nine have risen by six points and are five points higher than the Kentucky average at Scott County Ninth Grade School.
- Mathematics scores on the CTBS/5 at the end of grade nine have gained an average of 14 points and are nine points higher than the Kentucky average.
- The daily attendance rate for freshmen has risen from 89 percent in 1995-1996 to 93 percent in 2000-2001.
- Freshman failures have decreased from 17 percent in 1995-1996 to six percent in 2000-2001.
- Freshman discipline referrals have dropped by 54 percent since 1995-1996 and disciplinary expulsions declined from eight in 1995-1996 to zero in 1998-1999.

The journey toward improving the achievement of ninth-graders may have seemed like a thousand miles to leaders at Scott County High School in Georgetown, Kentucky, but they knew that it could be accomplished one step at a time.

The journey began in 1995, when Scott County leaders discovered that 45 percent of incoming freshmen were likely to fail at least one course and 17 percent were having to repeat ninth grade. Twenty percent of these students already had been held back a year.

Understandably, the ninth grade had many dropouts, expulsions and disciplinary problems. Attendance was low.

Focusing on freshmen

The school board and the local planning committee determined that freshmen needed their own "space" and more focused attention. Each year about 450 students enter ninth grade at this rural school in a suburb of Lexington. School leaders decided to house ninth-graders in the former middle school building, while 10th- through 12th-graders attended classes in a new school next door.

The Ninth Grade School would have its own administrators, teachers and counselors to help students develop academically, socially and emotionally. Because freshmen ordinarily get little recognition in high school, this school would strive to recognize and encourage many students frequently.

Reconfiguring space was only part of the strategy. The planners examined data, identified challenges and set goals for raising achievement in ninth grade. They vowed to reduce failures, dropouts, expulsions and disciplinary problems; offer a challenging curriculum with individualized instruction; and provide a safe, comfortable learning environment.

Four guiding principles set the tone for the Scott County Ninth Grade School:

- All students can learn at high levels.
- Not all students learn in the same way or at the same pace.
- Success fosters success.
- All students want to be successful, but some do not know how.

Dismal beginning

The outlook was dismal in September 1996, when the changes began. Principal Betty Hughes, who was assistant principal at the time, remembers cast-off desks and furniture in the old school and “sawdust everywhere” as the new school neared completion.

“Adversity pulled the staff together,” Hughes said. “Teachers and administrators began developing a challenging curriculum and tailoring the instruction to individual students’ needs, interests and learning styles.”

The changes have been dramatic. Classes are small, and each student has an individual graduation plan. Teachers know their students and how to motivate them to learn.

Mastering academic courses

All students, including special-education students, take Algebra I. “They’re getting it and they’re loving it,” Hughes said. Three Algebra II classes are offered for ninth-graders who have progressed to that level.

Every ninth-grader takes a high-level language arts course that emphasizes reading and writing. Students read for information and literary value (Romeo and Juliet and The Odyssey). They keep portfolios of items such as feature articles, personal narratives, poems and letters.

In 2001 the freshman class published *Finding Myself: A Journey*, a book of students’ poetry, prose and illustrations. Students, parents and friends attended an “autograph party” to celebrate the students’ accomplishments. As an extra thrill for the authors, the book is being sold on the Internet through Amazon.com.

Aligning the curriculum

The school is aligning the curriculum with state and national standards, one department at a time: First came mathematics, then language arts and social studies. In an ongoing initiative, high school English teachers meet for a week during the summer and periodically throughout the school year. These meetings enable them to eliminate overlap and address gaps in the curriculum. All alignment efforts are based on state standards.

From the beginning, Hughes and her staff worked hard to align the ninth-grade curriculum with those of feeder middle schools, grades 10 through 12, and area colleges. She urged middle grades principals to provide substitutes so that eighth-grade mathematics teachers could attend a retreat with the three ninth-grade mathematics teachers, the chairman of the high school mathematics department and a mathematics professor from Georgetown College.

Interdisciplinary teaching teams are a hallmark of the school's success. Students explored English and social studies through participation in a Shakespearean festival, and a Cinco de Mayo fiesta combined their studies in Spanish, mathematics, social studies, art and foods. Every interdisciplinary activity focuses on helping students learn concepts and skills they will need in the real world.

Teams of teachers

Each interdisciplinary team consists of four teachers — one each from English, mathematics, science and social studies — as well as other staff. The three teams — labeled red, white and blue — serve similar mixes of students. No group includes only high- or low-achieving students. The teams have a shared planning time and meet weekly to address students' academic problems. Through a \$250,000 grant from the federal Goals 2000 program, all team members received staff development.

Toyota, the county's largest manufacturer, sent personnel to the school to help the interdisciplinary teams learn strategies for teamwork, problem-solving and communication. They used a program called QUEST — Quest for Useful Employability Skills for Tomorrow.

The QUEST strategies are passed on to students, who use them in mathematics and science. Students in an algebra class calculated costs, profits and labor expenses and graphed the results for make-believe companies selling pizza and salsa. In a science class, students used applied physics concepts to eliminate loose, wobbly legs on classroom tables.

Extra help

Extra help for struggling students also has contributed to the school's good results in getting students to meet higher standards. The district's Extended School Services (ESS) program includes before- and after-school tutoring and the Second Chance for Success program for students who learn "in different ways, at different times and at different paces."

The Second Chance program helps students get back on track when they struggle during the school year. Students are referred to the program by their classroom teachers, who prepare contracts that specify the skills, concepts and assignments that the students must master in order to earn passing grades for the nine-week grading period. The students have five to six weeks to complete the contracts.

Students who have made an effort but still are failing at the end of the school year may enter a three-week "continuation school." Students whose final grades range from 57 to 67 are given a second chance to improve their scores and complete ninth grade. Each student is

referred to the program by a classroom teacher, who lists the skills and assignments the student must master in order to pass the course. Certified teachers provide individual instruction and monitor students' progress.

Getting ready for ninth grade

When eighth-grade teachers and counselors identify an incoming ninth-grader as “at-risk,” the student is invited to attend the Jump Start program in the summer or in September. The programs are not mandatory, but teachers contact parents to stress the importance of students' participation. The summer session is based on the students' needs and may include academic skills, goal-setting, team-building and problem-solving.

The September program involves before- and/or after-school sessions every Tuesday and Thursday and before-school sessions on Wednesdays and Fridays during the first month of school. The sessions focus on helping ninth-graders learn to study, organize and complete current assignments. The first program in September 2001 could accommodate 30 students; 17 students participated. Hughes expects the enrollment to grow as news about the program spreads.

Both the summer program and the September program emphasize connections between teachers and students. “We have found that many students do not do well in school because they do not bond with their teachers and with other students,” Hughes said. “This program encourages reluctant learners to establish a rapport with the faculty and other young people.”

New grading system

The school modified its grading system to encourage students to stay in school and earn their diplomas. The following example shows how the new grading scale would work in the English curriculum. Students who are failing an English course and are identified as at-risk receive I's for “incomplete” — rather than failing grades — at the end of the year. The next year, these students take a 90-minute block class, in which they use computers extensively and work at their own pace to improve their English and study skills. If they complete the course-work successfully by the end of the semester, they move on to English II in the second semester. The block schedule gives these students the opportunity to earn two credits in English and a half-credit in study skills by taking the double-period class and making passing grades for an entire year. Students who do not complete English I in the first semester take it in the second semester. Block courses also are available for students who need to catch up in mathematics or science.

The Ninth Grade School rewards students for hard work. In addition to games and refreshments, students are treated to special luncheons with teachers and administrators at local restaurants. To qualify for the luncheons, students must make progress in their studies and must complete an informal course on social skills and appropriate dress. Teachers say the incentives and rewards are having an effect. Students are gaining more confidence in their academic knowledge and skills and are more determined to graduate from high school.

Parental involvement is another factor in the school's success. Parents attend an open house in August to learn what will be expected of their children in ninth grade. They receive a newsletter in each grading period and attend an awards night for students toward the end of the school year. Teachers call parents regularly not only to talk about academic and disciplinary problems but also to convey good news and congratulations when students make progress.

Kentucky has supported the Ninth Grade School through grants and professional development. In 2002 the school received a professional-development grant from the state to implement an information-technology cluster as the school begins to establish career academies (schools within schools that focus on specific career paths).

Showing results

These efforts are paying off. By the end of the first year, there was a 7 percent decline in dropouts, a 6 percent drop in failures and a 2 percent increase in attendance. The school has seen many improvements after five years of the Ninth Grade School:

- Students' scores on the total battery (mathematics, language arts and reading) of the national Comprehensive Test of Basic Skills, fifth edition (CTBS/5) at the end of grade nine have risen by six points and are five points higher than the Kentucky average.
- Mathematics scores on the CTBS/5 at the end of grade nine have gained an average of 14 points and are nine points higher than the Kentucky average.
- The daily attendance rate for freshmen has risen from 89 percent in 1995-1996 to 93 percent in 2000-2001.
- Freshman failures have decreased from 17 percent in 1995-1996 to 6 percent in 2000-2001.
- Freshman discipline referrals have dropped by 54 percent since 1995-1996 and disciplinary expulsions declined from eight in 1995-1996 to zero in 1998-1999.

"In 2000-2001, our students exceeded the state and national averages for students in every area on the CTBS," Hughes said.

The class of 2000 was the largest in Scott County history, and the numbers of graduates continue to rise, as more students stay in school and complete courses that prepare them for the workplace and further education.

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Rise in students' mathematics achievement linked to mastery algebra

Making gains in algebra by teaching and reteaching

- The percentages of students scoring below the 50th percentile in mathematics on the Stanford 9 exam given at the beginning of the 10th grade have declined from 42 percent in 1996 to 27 percent in 2001 in the Springdale, Arkansas, school district.
- The percentages of students with proficient or advanced scores on the Arkansas end-of-course exams in algebra and geometry were higher in the district than in the state in 2001. In Algebra I, 26 percent of students in the district and 21 percent of students in the state had such scores. In geometry, 38 percent of district students and 20 percent of state students scored at the proficient or advanced level.

Mathematics achievement in Springdale, Arkansas, schools improved after the district adopted the mastery approach (in which students are taught and retaught until they learn at least 80 percent of the content) for teaching algebra to all freshmen. When the program began in 1996, 42 percent of students were scoring below the 50th percentile in mathematics on the Stanford 9 exam given at the beginning of 10th grade. By 2001, only 27 percent scored below the 50th percentile. In only five years, this percentage had dropped by 15 percentage points.

The gains occurred as this small community in the Ozark plateau was experiencing steady growth in the enrollment of immigrant students. Many of these students — primarily Hispanic — are from transient families who come to work in the local poultry industry. The students often speak limited English and are below grade level when they arrive.

The class of 2001 was the first graduating class at Springdale High School in which every student had completed at least Algebra I and geometry. The district requires four mathematics credits — one more than the state requirement of three — for graduation. Springdale makes sure that students master the critical subjects of algebra and geometry by providing extra time (about a third of the students need two years to complete Algebra I), multiple opportunities to succeed, and extra help to bolster classroom instruction.

A technology-oriented workplace

Springdale educators based their mastery standard of 80 percent on interaction with business leaders, who helped them understand what was necessary to succeed in a technology-oriented economy. The salaries for many jobs that students enter immediately after high school are based on employees' mathematics proficiency.

Springdale mathematics teachers were the first to recognize the need to revamp the curriculum. Student achievement was lower in mathematics than in any other subject measured by the

Stanford 9. Vicki Smith, mathematics coordinator for Springdale Schools, led the drive to develop a new standards-based, mastery-learning mathematics program. She submitted a grant proposal and was selected as the 1996 Christa McAuliffe Fellow for Arkansas. Each state could present one of these awards, which were named for the New Hampshire schoolteacher/astronaut who died when the space shuttle Challenger exploded in 1986. The award brought \$26,128 to support work on a new curriculum.

Many mathematics teachers in the district were involved in developing the new curriculum, which has three goals:

- Require all students to take four years of mathematics.
- Offer a competency-based algebra and geometry program with clear standards for student achievement and multiple opportunities for students to learn mathematics skills.
- Give low-achieving students the extra time and help they need to meet competency levels in algebra and geometry.

Students are tested at the end of each unit. Those who fail the first time have two more opportunities to pass and have access to many extra-help opportunities. No student is allowed to continue to fall behind with no hope of passing the course.

How mastery algebra works

Mastery algebra involves teaching and reteaching until students score at least 80 on a test of the material. Teachers use the tests to measure what students know and to devise different ways to reteach the content. All students in a mastery class are tested on each concept. Students who fail to meet the 80 percent standard receive additional help before they take a second test. If they do not meet the standard on the second test, they have access to several extra-help options outside of class. Students are responsible for learning the material well enough to pass the test.

Students who do not master the concepts covered in the first semester are given additional time. Many of these students catch up in the second semester. Those who do not catch up can attend school in the summer or at night during the school year.

The learning center is an option for nontraditional students (such as students who have children or whose situations make it difficult for them to follow a traditional schedule) who want or need to succeed in a short time. This option consists of five four-day weeks (60 hours) taught in a block schedule of three hours per course. The learning center appeals to many types of students, including those who have returned to school after being away for various reasons, those who are too old for junior high school, those who need a different schedule to attend school, and those who learn best when they have more time to focus on the work. The content in these classes is the same as what is taught in traditional classes.

Springdale teachers use various strategies — such as lab activities, group work and projects — to help students succeed. Students are expected to solve open-ended problems and to explain in writing how they arrived at the solutions. They use higher-order thinking skills to solve real-world problems. For example, one project required students to determine how much money they could earn for college if they worked two part-time jobs and earned two different hourly wages.

Teachers working together

As part of the mastery approach, teachers who teach the same course follow a pacing guide that ensures that every teacher is within one day of the others in teaching a specific topic or skill.

“The teachers decide how much time they will spend on each concept and expect everyone to stick to the plan,” Smith said. “If they get off schedule, they meet to figure out how to catch up.”

Teamwork involves three schools: Springdale High School, Central Junior High School and Southwest Junior High School. Ninth-graders attend one of the junior high schools, and 10th-through 12th-graders attend the high school. Teachers at all three schools work together to align the curriculum with state goals and standards.

Communicating with parents

Communication with parents has been vital to the success of mastery algebra and geometry, particularly when the program began. The creation of the mastery program and the district’s graduation requirement that all students take four mathematics courses were announced at the same time. The superintendent and the assistant superintendent for instruction sent every parent three pages of questions and answers about why the mastery program was needed and how students could meet the graduation requirement. The information packet also explained the extra help that would be available to students.

Springdale used its very effective teacher-adviser system to talk individually with parents about the mathematics program. Teacher-advisers met regularly with students and parents to explain the mastery approach and the new graduation requirements. Guidance counselors helped answer questions during the meetings. As parents gained a better understanding of the importance of mathematics achievement to their children’s futures, most resistance to the higher standards subsided.

Looking at the results

The percentages of students with proficient or advanced scores on the Arkansas end-of-course exams in algebra and geometry were higher in the district than in the state in 2001. In Algebra I, 26 percent of students in the district and 21 percent of students in the state had such scores. In geometry, 38 percent of district students and 20 percent of state students scored at the proficient or advanced level. School leaders hope to see even more improvement because they are realigning the algebra and geometry curricula to state standards and reorganizing the teaching staff.

The new, rigorous standards in mathematics also have helped reduce the percentage of Springdale High School graduates who need remedial studies in mathematics when they reach college. The percentage has dropped from 27 percent in 1999 to 25 percent in 2000 to 22 percent in 2001.

Springdale's success has inspired other districts statewide to follow suit. Arkansas has organized a consortium of 40 school districts that want to change their mathematics curricula.

Lessons learned

Springdale leaders and teachers learned a big lesson about regrouping students. Some classes had too many students, while others had too few. Students' schedules had to be revised, and mathematics teachers had to prepare to teach several levels. All algebra classes now are scheduled so that students can be moved into other groups based on their progress without interfering with the rest of their scheduled classes.

Another lesson involved the grading system, which is designed to gauge progress on certain measures at the end of each grading period. The school has added an enrichment academy and is allowing some students to work at their own pace. These students are graded on an individual basis.

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Support team helps ninth-graders raise achievement in reading, writing, mathematics

Improving students' chances of success

Data on students who completed the support program at Lemon Bay High School in its first two years (1999-2000 and 2000-2001) encouraged the school to continue the program.

- During the first year, 86 percent of students had grade-point averages that improved or remained the same. Sixty-six percent had attendance that improved or remained the same.
- During the second year, 75 percent of students had the same or a better grade-point average. Sixty-one percent had the same or better attendance.
- Eighty-eight percent of students from the first two years remained in school.

Keep Trying

*When you think you can't go on,
Someone will pick you up.
When you think it's just out of reach,
Someone will push it toward you.
And when you think you are doing great,
Someone will throw you a party!*

This verse, written by a student at Lemon Bay High School, reflects the feelings of many freshmen who are benefiting from the school's ninth-grade transition program. The "someone" mentioned in the verse could be any of the staff members who work together to help students stay in school and achieve at higher levels.

Lemon Bay High School is in the town of Englewood, Florida, on the Gulf of Mexico near Sarasota. Englewood is a middle-income community with a large population of retirees. There are 1,200 students at Lemon Bay High School.

In the late 1990s, Lemon Bay High School leaders wanted to reverse a trend: Many ninth-graders were "falling by the wayside" when presented with demanding courses and high expectations. The school needed to accelerate these students' achievement and keep them involved in learning.

The Student Support and Assistance Program (SSAP) was developed in response to this concern. Now in its third year, the program is showing results: More students are staying in school and achieving at higher levels. The program has been expanded to serve 10th-graders, too.

Biggest challenge in grade nine

"We knew our biggest challenge in improving curriculum and instruction and raising student achievement was in the ninth grade," Principal William Strickland said. "If we didn't address low achievement at that level, we would only be putting Band-Aids on students for their remaining years. Ninth-graders are more apt to fall into deep holes that they can't climb out of without help. We wanted all of our students to be in an environment where they can succeed."

Lemon Bay has several criteria to identify incoming freshmen who need special assistance. These students:

- had grade-point averages (GPAs) below C in core academic subjects in the eighth grade;
- scored below standards on the Florida Comprehensive Achievement Test (FCAT) in mathematics, language arts and writing;
- failed the Florida Writes eighth-grade writing test; and
- have histories of discipline problems and poor attendance.

Parents attend a special open house at the middle school in the spring before high school registration. Randi McDowall, the SSAP coordinator and school social worker, explains the program and becomes a “familiar face” for students and parents.

Class schedule and size

Students in the program take English/reading during a 90-minute block at the beginning of each school day. Most take algebra in a 90-minute block at the end of the day. An SSAP course counts as one elective. The rest of the school day consists of regular 45-minute classes.

Each SSAP class has fewer students than regular classes. The close-knit environment allows teachers to become familiar with their students’ strengths and weaknesses in order to provide them with targeted assistance. “Academically, these students respond well in a small-group setting,” English teacher Dawn Bedford said.

In its second year, the program expanded to include “repeat” ninth-graders and 10th-graders who needed additional academic and behavioral support. The SSAP team keeps up with these students by examining progress reports and monitoring discipline referrals and school attendance.

The right teachers and counselors

Strickland believes that the SSAP’s success depends on having the right teachers and counselors. He identifies “student-focused” teachers who know the special needs of ninth-graders and want to help these students succeed. When the teachers are not working with SSAP students, they are teaching honors-level courses.

SSAP teachers plan their lessons to meet their students’ specific needs and to get students actively involved in learning. For example, students in one SSAP English class do research on the Internet for group projects. They choose books from a teacher-prepared list to read independently or aloud in class.

Teachers meet during planning time from 7:30 to 8:30 a.m. daily. They address students’ problems and devise “game plans” to overcome deficiencies. If a student is struggling in a regular mathematics class, for example, an SSAP teacher arranges for special tutoring.

Guidance counselors meet with students and their parents to develop, refine and implement four-year programs of study. They also keep track of absences and other undesirable actions. If a freshman does unacceptable work or is tardy or absent consistently, the counselor schedules a parent/teacher conference. Such conferences strengthen ties with parents and reinforce the school’s expectations for students.

“If a guidance counselor phones a child’s home, the parent hears a familiar voice,” Strickland said. “When the parent gets involved, the child knows that someone cares.”

Close monitoring

The SSAP coordinator keeps a file on every SSAP student. The file contains an individualized plan that includes academic, attendance and behavior goals for the year. These goals are based on the student's performance in eighth grade. Each student receives a biweekly progress report with a "comments" section in which teachers can report on attendance and behavior.

SSAP freshmen are required to keep portfolios of their work. Students determine what to include in the portfolios, and McDowall routinely checks the contents.

"Students are proud of their work," McDowall said. "They look forward to taking the portfolios home to share their accomplishments with their parents."

Rewards for good work

Because Strickland believes it is important to tell ninth-graders that they are doing well, he awards certificates for gains in academic achievement and school attendance. The SSAP team sponsors parties to celebrate victories, both big and small.

SSAP students have earned a trip to a Florida amusement park and the opportunity to participate in a YMCA "ropes" course — a series of challenges that can be used for recreational, educational, developmental or therapeutic purposes. Students also have been treated to breakfast at local restaurants.

"It means a lot to students when they receive certificates for grade improvement or increased attendance," Strickland said. "They may not have received a lot of recognition in the past."

Measuring progress

Data on the 147 students who completed the program in its first two years (1999-2000 and 2000-2001) show that it is producing results. In the first year, 86 percent of students had GPAs that improved or remained the same, and 66 percent had attendance that improved or remained the same. In the second year, 75 percent of students in the program had the same or better GPAs, and 61 percent had the same or better attendance.

McDowall attributes the slight declines in the second-year percentages to the fact that 10th-graders were included for the first time in that year. "Freshmen have farther to go, so they improve more," McDowall said. "Tenth-graders had the program the previous year and started at a higher level. They had less room to improve."

Of the students who completed the program in 1999-2000 and 2000-2001, 88 percent remained in some form of schooling (public schools, private schools or home schooling). Small percentages left school for unknown reasons (3 percent), withdrew because of nonattendance (4 percent), withdrew with no intention of returning to school (2 percent) or entered detention facilities (3 percent).

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High Schools That Work

Goals and Key Practices

Goals

- Raise the mathematics, science, communication, problem-solving and technical achievement of more students to the national average and above.
- Blend the essential content of traditional college-preparatory studies — mathematics, science and language arts — with quality career/technical studies by creating conditions that support school leaders, teachers and counselors in carrying out key practices.
- Advance state and local policies and leadership initiatives necessary to sustain a continuous school-improvement effort for both academic and career/technical studies.

Practices

- **High expectations** — setting higher expectations and getting more students to meet them
- **Career/technical studies** — increasing access to intellectually challenging career/technical studies, with a major emphasis on using high-level mathematics, science, language arts and problem-solving skills in the modern workplace and in preparation for continued learning
- **Academic studies** — increasing access to academic studies that teach the essential concepts from the college-preparatory curriculum by encouraging students to use academic content and skills to address real-world projects and problems
- **Program of study** — having students complete a challenging program of study with an upgraded academic core and a major
- **Work-based learning** — giving students and their parents the choice of a system that integrates school-based and work-based learning that spans high school and postsecondary studies and that is planned by educators, employers and employees
- **Teachers working together** — having an organization, structure and schedule giving academic and career/technical teachers the time to plan and deliver integrated instruction aimed at teaching high-level academic and technical content
- **Students actively engaged** — getting every student involved in rigorous and challenging learning
- **Guidance** — involving each student and his or her parents in a guidance and advisement system that ensures the completion of an accelerated program of study with an in-depth academic or career/technical major
- **Extra help** — providing a structured system of extra help to enable students who may lack adequate preparation to complete an accelerated program of study that includes high-level academic and technical content
- **Keeping score** — using student assessment and program evaluation data to improve continuously the school climate, organization, management, curricula and instruction to advance student learning and to recognize students who meet both curriculum and performance goals

Making Middle Grades Work Goal and Improvement Framework

Goal

- Increase the percentages of eighth-graders who perform at the proficient levels in academic subjects.

Comprehensive improvement framework

- **An academic core that is aligned to what students must know, understand and be able to do to succeed in college-preparatory English, mathematics and science** — All students in the middle grades need an academic core curriculum that accelerates their learning, challenges them and appeals to their interests.
 - In mathematics, all students satisfactorily complete Algebra I or pass a pre-algebra test of proficiency and use algebra concepts to reason and solve problems.
 - In science, all students use laboratory and technology experiences to learn scientific concepts in physical, life and earth/space sciences.
 - Reading instruction is incorporated into all content areas in the academic core curriculum through grade eight.
 - The language arts curriculum requires students — before they leave eighth grade — to use language correctly and effectively to find, organize and communicate information.
 - The social studies curriculum requires students — before they leave eighth grade — to describe their heritage, their government, their world and economic principles through key issues of the past, present and future.
- **A belief that all students matter** — Each student needs to have a personal relationship with an adult who takes an interest in his or her successful learning, goal-setting, educational planning and personal growth.
- **High expectations and a system of extra help and time** — Students learn in different ways and at different rates. Middle grades students need enough time and help to meet more rigorous, consistent standards for all eighth-graders. The middle grades curriculum should accelerate achievement for all students.
- **Classroom practices that engage students in their learning** — Young adolescents need varied learning activities linked to challenging academic content and opportunities to use new skills and concepts in real-world applications.
- **Teachers working together** — All teachers need time to plan together, to develop and coordinate learning activities, and to share student work that meets proficiency standards.
- **Support from parents** — Parents must understand clearly and must support the higher standards for performance in the middle grades.

Comprehensive improvement framework (continued)

- **Qualified teachers** — Middle grades teachers must know academic content and how to teach young adolescents.
- **Use of data** — States, districts and schools continuously must use data on student, school and teacher performance to review and revise school and classroom practices as needed.
- **Use of technology for learning** — Middle grades students and teachers must have opportunities to explore and use technology to improve knowledge and skills in English/language arts, reading, mathematics, science and social studies.
- **Strong leadership** — Middle grades schools need strong, effective principals who encourage teachers and participate with them in planning and implementing research-based improvements.

