

# EDUCATION FINANCE SYSTEM



## **Brewster Pierce Elementary School Case Study**

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**Brewster Pierce Elementary School  
Chittenden East Supervisory Union  
Huntington, Vermont**

Brewster Pierce Elementary School is in the Chittenden East Supervisory Union, which the school refers to as “the district.” It is located in the rural southwestern, portion of Chittenden County -- the county that also includes Vermont’s largest city, Burlington. The school is about 30 minutes off Interstate 89, accessed via rural roads winding through picturesque farm and forest settings. Huntington, the town in which the school exists, is rural farming territory that is in transition to a more “suburban,” and “professional” family community, though it continues to retain its rural nature. The community is diverse with a wide range of occupations and family Socio-Economic Status (SES). Though a number of farming families populate the community, there is also a growing number of independent business owners who work out of their home or own businesses that require extensive travel around the state. In recent years substantial numbers of artists, musicians, and professionals who work in Burlington and South Burlington have moved to this area. Reflective of the commuting nature of the Vermont workforce, many parents drop off their children at school by 7:00 a.m. and then commute to distant jobs.

Brewster Pierce enrolls about 120 students in grades Kindergarten through 4. It also has a preschool with 24 students who are enrolled in one of two half-day programs with 12 students each. Approximately 25% of students are eligible for free and reduced price lunch, which is prepared by a school cook who purchases many ingredients from local organic farmers; all students can buy lunch if they want. For the 2009 school year (the last year for which we have data for all districts), Brewster Pierce spent \$7,704 per student for current instructional expenditures minus transportation, significantly below the state wide average of \$13,923.

School Performance has improved in recent years. As shown in Table 1:

- Mathematics achievement on the New England Common Assessment Program (NECAP) increased from 49% at or above Proficient in 2005 to 75% in 2010, and the percent scoring at the Proficient with Distinction level nearly doubled from 16% to 29% during the same period.
- Reading performance also improved, growing from 57% performing at or above Proficient in 2005 to 76% scoring at those levels in 2010. The percent performing at the Proficient with Distinction level has varied from a low of 12% (2009) to a high of 33% (2007), and stands at 23% for the 2010 administration of the NECAP.
- Writing performance virtually doubled from 2005, rising from 22% performing at Proficient or above in 2005 to 43% performing at that level in 2010.
- Science performance in the fourth grade was high in both 2008 and 2009, but dropped from 78% at Proficient or above in 2009 to 43% in 2010. Though not shown in the table, the principal reported that science results in 2011 improved to 78% at or above Proficient.

This case is the story about how Brewster Place produced these impressive results. These results emerged from the professional work of teachers, implementing a solid curriculum program, complemented by multiple additional strategies designed to insure that all students received the instructional time needed to perform at proficient levels and above. The case is based on written documents as well as interviews with the principal and nearly all certified staff in mid-October. The case is part of a study of the Vermont school funding system being conducted for the legislature by Lawrence O.

Picus and Associates. The case has the following six sections: School Staff, Goals, School Schedule, Curriculum and Instruction Program, Assessments, Interventions, Professional Development, School Culture and a Summary.

**Table 1**

**NECAP Scores for Brewster Pierce PreK-4 Elementary School, 2005-2010**

<b>Subject and Performance</b>	<b>2005 NECAP</b>	<b>2006 NECAP</b>	<b>2007 NECAP</b>	<b>2008 NECAP</b>	<b>2009 NECAP</b>	<b>2010 NECAP</b>
<b>Mathematics</b>	<b>Grades 3-8</b>					
Proficient and Above	49%	71%	72%	82%	70%	75%
Proficient with Distinction	16%	23%	30%	26%	29%	29%
<b>Reading</b>	<b>Grades 3-8</b>					
Proficient and Above	57%	70%	78%	72%	70%	76%
Proficient with Distinction	17%	20%	33%	19%	12%	23%
<b>Writing</b>	<b>Grade 5</b>					
Proficient and Above	22%	45%	41%	49%	--	43%
Proficient with Distinction	4%	11%	15%	14%	--	4%
<b>Science</b>	<b>Grade 4</b>					
Proficient and Above				70%	78%	43%
Proficient with Distinction				5	0	4%

Source: LOP calculations from State NECAP data.

## **School Staff**

We identified over 15.1 full-time certified staff positions and 3.6 paraprofessional positions at the school including the following (numbers reported in full time equivalents (FTE)):

- 1 principal
- 1 school secretary
- 1 preschool teacher and 0.8 preschool aide
- 2 Kindergarten teachers
- 1 first grade teacher
- 1 second grade teacher
- 1 combined grades 2 and 3 teacher
- 2 combined grades 3 and 4 teachers
- 1.8 specialist teachers including
  - 0.2 art
  - 0.2 music
  - 0.6 P.E.
  - 0.2 Spanish
  - 0.6 librarian
- 1.1 extra help professionals including:
  - 0.2 math
  - 0.9 Title I reading
- 1.2 pupil support staff including:
  - 0.6 guidance counselor

- 0.4 nurse
- 0.2 social worker
- 2.0 Special education teachers
- 2.8 teaching assistants including:
  - 0.8 for Math Recovery and Do the Math (funded 50% regular program and 50% and special education)
  - 1.0 TA for My Sidewalks, Foundations and 1-1 special education (half of this position's time), funded 50% regular program and 50% and special education
  - 1.0 TA who teaches the Soar to Success intervention and provides in-class support for reading and math (funded with regular education dollars).

Put a different way, for professional staff, the school has one administrator (the principal), 7 grade level teachers (plus a preschool teacher). 1.8 specialist teachers that include the 0.6 librarian, 1.1 positions devoted to extra help in math and reading, 1.2 pupil support staff, 2 certified special education teachers, and 2.8 teaching assistants (2.0 with BA degrees) who are integral to the school's "intervention" strategies.

Excluding preschool, regular classes average about 17 students (120 students divided by 7 grade level teachers). The 7 core teachers are supported by an additional 5.9 certified teacher positions as well as 2.8 teaching assistant positions, with substantial special education staff – 2 teachers and 1.0 FTE teaching assistant positions.

### **School Goals**

When the NECAP was first used in 2005, the Brewster Pierce's staff concluded that the student performance was lower than expected and lower than both the school and

community wanted. These low scores spurred the school to begin framing a plan to improve performance across the board. Since then the focus has been to improve student performance, but to date, no specific numerical targets for student performance have been established.

The school's overall goal is to improve student performance in reading and mathematics, and to have every student read and write at grade level and do math at grade level. The school has begun to develop goals to have students read at the Proficient with Distinction level, so there would be more academic "push" for higher achieving students.

### **School Schedule**

The school day runs from 7:50 a.m. to 2:30 p.m., with 30 minutes for lunch. The art, music, PE, Spanish, guidance counselor and library teachers are used to provide instruction at times that allow grade level teachers to have pupil free time each day during the week. Typically, two specialist teachers provide electives for students in regular teacher classes on a daily basis but on Wednesday, there are three time periods when specialists provide elective classes for one period for each core teacher's class. The music teacher provides classes on Monday and the art and Spanish teachers provide classes on Wednesday. The PE teacher and librarian provide classes on Tuesday and Friday. The guidance counselor also provides some classes, doing so on Monday, Wednesday and Friday.

As a result, teachers have about 25-30 minutes of individual planning time every day plus some additional daily common time for collaborative work. Until this year, grade alike (K-2, 2/3, 3-4) teachers did not have common planning time, making it

difficult to develop much activity for collaborative teacher groups. This year each set of grade alike teachers has one 45-minute period of common planning time each week. In addition, there is a common extended lunch period which offers additional time for collaboration. The kindergarten teachers use this time to develop common units in social studies and science in addition to reading and mathematics. Every teacher in the school was interviewed and all indicated they liked the new common time for planning with grade-alike colleagues very much.

A second schedule innovation implemented this year was a 30-40 minute “intervention block” (IBlock) every day. This block of time is intended to provide more opportunities for students to get extra help generally from their regular teachers. Though some students receive targeted extra help during small group time during the regular reading and math instructional times, the IBlock provides another opportunity for the regular teacher, sometimes augmented by teaching assistants, to provide students with extra academic help. The hope is that the assistance students receive during IBlock will reduce the number of children who require more focused and individual services provided through additional interventions (discussed below).

### **Curriculum and Instructional Program**

Prior to the arrival of the school’s two most recent principals, the school was run in a pretty autonomous manner. Despite a formal district curriculum, teachers had considerable autonomy over what they taught, how they taught each subject and how much time each teacher devoted to instruction in all areas. This autonomy existed in all subjects including the core subjects of reading, writing and mathematics. As one teacher said, “We were given a curriculum and told to go teach it.” There was little common

school wide focus or work. This teacher went on to say that “Today teachers receive a new curriculum, multiple tools to help deliver the curriculum, and training to acquire the instructional skills to be more effective in teaching it.”

In recent years the school has developed a stronger academic focus. This has been particularly notable in the last two years since the arrival of the schools current principal. The school’s general “theory of action” is that improved student performance requires:

- More instructional time for core subjects
- A strong curriculum and instruction program
- Early intervention in reading with an emphasis on phonemic awareness and phonics
- Tracking student progress during the year
- Providing extra help or interventions to struggling students throughout the academic year
- The use of research-based methods for the core instructional program as well as various interventions.

The performance gains made by the students at Brewster Pierce to date show that this theory of action has been successful so far.

For the 2011-2012 school year, teachers are required to allocate 90 minutes a day to both reading and mathematics instruction, and provide additional time for writing. In the past, time allocated for reading, writing and math instruction varied substantially among teachers and classrooms. Given the need to improve student performance in all three content areas, the current principal felt that the school needed a more formal

approach to allocated instructional time and instituted the required 90 minutes.

Interviews with teachers indicated general support for this stronger academic focus and allocation of time.

The school also changed the curriculum for both reading and mathematics, adopting a new reading program at the school level and implementing a district (supervisory union) initiated change in the math program. For **reading**, the school chose not to adopt a text-based program and continues to implement a “guided reading” program, with leveled books; the literacy block is characterized by mini lessons, then small groups and centers within each class, and considerable independent reading. Because “guided reading” short changes if not ignores phonemic awareness and phonics, the principal had the school adopt the Wilson Foundations program, which is used in Grades K-3.

Wilson *Foundations* for K-3 is a phonological/phonemic awareness, phonics and spelling program for the general education classroom; it is not a complete reading program but appropriately used as a supplementary program. Often used as a supplement to the broader reading program or as an intervention, Brewster Pierce’s teachers use *Foundations* as a supplementary reading program for all students to reinforce phonemic awareness, phonics and spelling. For spelling, writing and reading reinforcement in Grade 4, the school uses the *Megawords* program, published by Educator’s Publishing Service. *Megawords* is a multisensory reading and spelling program that supplies students with strategies and procedures for reading and spelling multisyllabic words through a multisensory approach.

To provide early interventions for kindergartners struggling with phonemic awareness and phonics, the school also adopted the *My Sidewalks* program. According to its website,

*My Sidewalks* is a research-based, intensive elementary reading intervention program. It is designed for students who are unable to read and comprehend grade-level materials and who are unable to benefit adequately from the strategic intervention that supports their core classroom reading instruction. *My Sidewalks* follows the Response To Intervention Model and is built on instruction in the priority skills of phonemic awareness, phonics, fluency, vocabulary, and comprehension skills and strategies .... as defined by the National Reading Panel .... *My Sidewalks*.... is intense, includes fast-paced instruction delivered to small groups of students for at least thirty minutes per day in addition to their core classroom instruction.

One of the school's teaching assistants has been trained in *My Sidewalks* and provides the instruction for this supplemental program. *My Sidewalks* is designed to be used with groups of no more than six students in 30-45 minute lessons, with time varying for kindergarten students.

The 90-minute reading block is divided into 3-4 sets of activities. The first 15-20 minutes can include a short lesson in a reading skill, or a read aloud or some whole class activity. The next 40-60 minutes are guided reading, during which students are organized into 3-4 groups of 3-4 students, with each group working with a "leveled book." During this time, the teacher circulates among the groups to: monitor progress; provide; mini lessons on skills specific to each group; and sometimes is assisted by the "interventionists" that are part of the school's Literacy Team (discussed below).

Most teachers use the *Literacy Continuum* published by Fountas and Pinnell to aid the teacher in focusing on specific reading skills in the small groups, through there is a belief that more professional development is needed for teaching comprehension skills.

Students also spend substantial amounts of time engaged in “independent reading,” much of it done in the library which is popular with the students. The current principal has purchased a large number of leveled books, both in all of the classrooms and in the library to ensure there are enough books in the school to meet the approach used to teach reading. Even with these purchases, there is a general view that more leveled books are needed.

Students also are taught writing for an additional 30-40 minutes, three to four times a week. Teachers typically use the Writers Workshop approach and address the Six + 1 writing traits. The Six + 1 writing traits draw from the work of Ruth Culham. Culham provides training for teachers in how to evaluate student writing in the traits—ideas, organization, voice, word choice, sentence fluency, conventions and presentation—with accuracy and reliability using clearly defined scoring rubrics. There is a Culham book for the primary Grades K-2, and another for Grades 3 and higher.

In the “writers workshop” approach to writing, teachers start with a mini lesson on some writing issue, students write, students then conference with the teacher and then have peer students review their writing (though there is less of this in the primary grades), then the student rewrites and prepares the writing as a final copy and shares it with the class.

The school also created a Literacy Team, which includes the special education teacher, the speech and language special education teacher, the Title I reading teacher (who has been trained in Reading Recovery), and two teaching assistants (both of whom have a BA and one of whom is just short of earning full teacher certification). The principal also is a member. The Literacy Team administers the AIMSWEB assessments three times a year, compiles the results, and then works with teachers to decide which

interventions each individual student needs. Further, members of the Literacy Team also provide targeted assistance to students during “push in” times during regular reading instruction, during the Intervention Block of 30-40 minutes, and sometimes in “pull out” sessions with very small groups of students.

The district (supervisory union) initiated a change in the **mathematics** curriculum to Pearson *Investigations*. According to the Pearson web site:

*Investigations* is a complete K-5 mathematics curriculum, developed at TERC in Cambridge, Massachusetts. It is designed to help all children understand fundamental ideas of number and operations, geometry, data, measurement and early algebra. The curriculum is designed to:

- Support students to make sense of mathematics and learn that they can be mathematical thinkers
- Focus on computational fluency with whole numbers as a major goal of the elementary grades
- Provide substantive work in important areas of mathematics—rational numbers, geometry, measurement, data, and early algebra—and connections among them
- Emphasize reasoning about mathematical ideas
- Communicate mathematics content and pedagogy to teachers
- Engage the range of learners in understanding mathematics.

Underlying these goals are three guiding principles that are our touchstones as both students and teachers become agents of their own learning:

- Students have mathematical ideas. The curriculum must support all students in developing and expanding those ideas.
- Teachers are engaged in ongoing learning about mathematics content and about how students learn mathematics. The curriculum must support teachers in this learning.
- Teachers collaborate with the students and curriculum materials to create the curriculum as enacted in the classroom. The curriculum must support teachers in implementing the curriculum in a way that accommodates the needs of their particular students.

Based on extensive classroom testing, *Investigations* takes seriously the time students need to develop a strong conceptual foundation and skills based on that foundation. Therefore, each curriculum unit focuses on an area of content, in depth, providing 2 to 5 weeks for students to develop and practice ideas across a variety of activities and contexts that build on each other.

Teachers in the school were quite articulate in describing their understanding of the bold objectives of the *Investigations* program. Several times they described how students are able to produce multiple solutions to various problems. One teacher even said, “One student seems to think mathematically in Base 5, so his approaches and solutions are always something unique and different.”

All the *Investigations* curriculum units include two to three formative assessments, to be used during the teaching of the unit. The curriculum also includes suggested classroom activities as well as common end-of-curriculum unit tests. Thus it appears that in mathematics, teachers implement a pretty consistent curriculum, in that they teach all the curriculum units in Investigations, and use the formative assessments and the end-of-unit tests that are part of the program. These tests are also supplemented in Brewster Pierce with a fall and spring math test.

The typical math class is 65-70 minutes in length with another 10-15 minutes of math at some other time during the day. Classes begin with a 10-minute math warm up. Then there would be 15-20 minutes of direct instruction. This is followed by 3-4 small groups where students work with the concept being taught, followed by classroom discussions with students who present their various solutions. The class ends with the teacher summing up student solutions and relating the work they completed back to the concepts, knowledge or skills being taught.

The core math program is supplemented by *Fastt Math*, a Scholastic online program that provides students with practice in basic mathematical skills. Students have Fastt Math sessions about four times a week. According to its web site:

The *FASTT Math* intervention program (Fluency and Automaticity through Systematic Teaching with Technology) uses the research-validated FASTT system to help all students develop fluency with basic math facts. *FASTT Math* assesses all students to uncover fluency gaps and to establish a baseline of fluency for each student. Then, *FASTT Math* automatically differentiates instruction in customized, 10-minute daily sessions. *FASTT Math* ensures that all students, regardless of their fluency level, build the long-lasting fluency they will need to tackle higher-order math.

*Fastt Math* is available in both English and Spanish, and can be used with almost any school schedule.

*Fastt Math* is further supplemented by two interventions: *Math Recovery*, which is a tutoring program for students in grades K-2, and the Marilyn Burns developed [Do the Math](#) program, a 12-module intervention program that focuses on number and operations for students in grades 2-4. [Do the Math](#) targets addition and subtraction, multiplication, division, and fractions.

So the core math program includes for all students a text-based program, *Investigations*, supplemented by *Fastt Math* to reinforce acquisition of basic arithmetic skills, and two major interventions, *Math Recovery* (mainly for students in grades K-2) and *Do the Math* (mainly for students in grades 2-4).

### **Assessments**

In addition to taking NECAP seriously, Brewster Pierce uses additional assessments that are required for the school's overall strategy to continuously monitor student performance so they can provide interventions and extra help when needed.

Several teachers mentioned entering multiple types of student data into the district's VCAT online system. VCAT – the Vermont Common Assessment Tool – was started in this district by Steve Perry, who now is an independent consultant; VCAT was

adopted across the state as a way to track student data. VCAT also includes curriculum and assessment guidelines for reading based on state standards; the system allows teachers to set goals for each student for the year and then to monitor student progress towards those goals over the course of the school year.

Though not used in the same way by all teachers, the school is able to track AIMSWEB data and DRA2 reading data, the formative and common end of unit test data for math, IEP plans, and any other diagnostic or tracking data for students.

In order for all teachers to have a common data system to track student progress in reading, AIMSWEB was adopted as a “benchmark” testing system. AIMSWEB testing is administered three times during the year (though there is discussion at the school to administer it more often), with the results used to help place students into various intervention programs. AIMSweb is a benchmark and progress monitoring system based on direct, frequent and continuous student assessment, focusing on reading skills in the primary grades. It includes both benchmark testing, which is administered three times a year, and what it calls strategic monitoring, which is administered monthly for at-risk student. Brewster Pierce currently uses the benchmark component of the program but intends to use the strategic monitoring component in the near future.

Brewster Pierce also uses the DRA2 reading assessment. The DRA2 is a research-based assessment used to determine a child’s independent reading level. The DRA2 is a criterion-based authentic assessment that measures a student’s ability to preview and predict a story, fluency in oral reading, and expression the student uses when reading. In a one-on-one conference, DRA2 enables teachers to systematically observe, record, and evaluate change in student reading performance and to plan for and teach

what each student needs to learn next. So by measuring reading comprehension and reading fluency teachers are able to determine appropriately leveled reading materials for instruction and what types of independent reading can be expected from each student.

Many teachers also develop their own “running records” for assessing student progress in reading.

As noted above, the Investigations mathematics curriculum program provides two to three formative assessments for each curriculum unit, as well as common end-of-curriculum unit tests. Both of these are supplemented in Brewster Pierce with a fall and spring math test, which can also be entered into VCAT.

Finally, the school uses the SNAP monitoring assessments for math. This is a research-based formative assessment program designed to assess student mastery of foundational skills in math and to enable teachers to target specific content that students need to secure that foundation. The early math skills assessed with SNAP are predictive of future success in upper grade mathematics performance for students in Grades K-4.

In addition to the assessment instruments described above, the school also uses several other diagnostic assessments in both reading and mathematics, and can further track student performance in both subjects through *Foundations*, *My Sidewalks*, *Fastt Math* and *Do the Math*.

### **Interventions**

As described above, the theory of action for improving student performance in this school includes both early interventions as well as ongoing interventions. As a result, the school has a comprehensive array of interventions for both reading and mathematics. The intervention efforts begin in regular reading and math classrooms

where teachers provide targeted help to students individually or in groups during the time they are working in small groups.

Further interventions take the form of additional help from the regular teacher. This year the school created a separate, 30-45 minute Intervention Block every day for every class. This strategy has been developing all over the country to insure that all students are provided extra help by the regular teacher outside of the regular reading and math instructional blocks, before additional and more targeted intervention or extra help, such as reading and math tutoring.

Though the extra help provided during the Intervention Block is provided primarily by the regular teacher, their work is supplemented by a comprehensive group of “intervention staff” who provide extra assistance during the Intervention Block as well as offer additional extra help to students at other times during the day, often pulling students out of elective classes. The school’s intervention or “extra help” staff includes:

- One Title I Reading/*Reading Recovery* teacher
- One Teaching Assistant trained in *Math Recovery* (this individual is in the final stages of earning a full teacher license)
- One TA trained in Literacy who teaches the Kindergarten *My Sidewalks* program, and
- Two special education teachers.

These staff provide both within classroom extra help as well as extra help through pull out sessions with small groups or one-to-one help.

In grades one and two, the Reading Recovery Title I teacher uses AIMSWEB and DRA2 to flag kids who need a double dose of reading instruction. This expert reading

teacher also provides similar extra help strategies for the lowest performing reading groups, and for the kindergarten students is assisted by the TA who is trained in *My Sidewalks*.

Intervention programs used in the school include:

- *My Sidewalks* for kindergarten children struggling with phonemic awareness and phonics.
- *Read Naturally*, a reading fluency program. *Read Naturally's* structured intervention programs combine teacher modeling, repeated reading, and progress monitoring to enhance reading fluency. In *Read Naturally*, students read along while listening to a recording of a fluent reader. For repeated reading, students practice reading a story until they can read it at a pre-determined goal rate. Mastering a story helps students build fluency and confidence.
- *SOAR to Success*, a published reading series with leveled books used for slower paced interventions so struggling students have more practice at their appropriate reading speeds. *Soar to Success* at Brewster Pierce is used a reading intervention for students in grades 1-4 who are reading below grade level. It is used in addition to a school's core reading program. Two primary goals of this intervention are: to accelerate students' reading ability, and, to help students to quickly and easily apply the comprehension and decoding strategies they have learned to other content area texts. The ultimate goal of *Soar to Success* however, is to increase students' understanding of what they read through an approach called reciprocal teaching, designed to strengthen reading comprehension and fluency.

- The school had provided Reading Recovery tutoring in the past but those services have been dropped because of budget cuts. Nevertheless, the Title I Reading TA still provides some 1-1 tutoring, but now only to students in grades K-2, with the emphasis on Grade 1.
- FasttMath to reinforce the acquisition of arithmetic facts for grades 2-4.
- Math Recovery, which is a tutoring program for students in grades K-2.
- *Do the Math* in grades 2-4, an intervention to further reinforce acquisition of arithmetic skills.

These extra help strategies and programs, or interventions, are further supplemented by a special education program for students with IEPs. The school has two special education teachers and two special education trained teacher assistants. Table 2 indicates the elements of the core reading and math programs, their program augmentations, key interventions and major assessments.

**Table 2**

**Core Elements of the Reading and Math Programs, Augmentations and Interventions**

	<b>Reading Program</b>	<b>Math Program</b>
<b>Core Program</b>	Guided Reading with Leveled Books, K-5	<u>Investigations</u> commercial program, K-5
<b>Core Program Augmentation</b>	<u>Foundations</u> for phonics and spelling, K-3	<u>Fasst Math</u> , for math fundamentals, all grades
<b>Interventions:</b>	<u>MySidewalks</u> for phonics for kindergarten	
	Tutoring for Grades K-3, but mainly Grade 1-2	<u>Math Recovery</u> tutoring for Grades K-2
	<u>Read Naturally</u> , for early grades to improve reading fluency	<u>Do the Math</u> , Grades 2-4 for arithmetic skills
	<u>Soar To Success</u> for help in Grades 1-4 for content reading comprehension	

<b>Assessments:</b>	<u>AimsWeb</u> for tracking reading skills in Grades 1-5	<u>SNAP</u> math assessments for math fundamentals, Grades 1-5
	<u>DRA 2</u> assessments for comprehension and fluency	Formative assessments in each <u>Investigations</u> Curriculum Unit
	<u>VCAT</u> online management system	<u>VCAT</u> online management system

### **Professional Development**

When the district adopted the *Investigations* program, it provided a range of professional development for all teachers to help them implement the program. Nearly all teachers mentioned this training and thought it was helpful for program implementation. They stated that Investigations has produced the most substantial gains in student performance of all the programs in use at the school.

The school took the lead in providing professional development for its literacy initiatives. It required teachers to take courses on new approaches to teaching reading, discussed literacy instruction and reading curriculum at staff meetings, encouraged teachers to form groups to discuss literacy strategies, and identified books the faculty would read and discuss together; all designed to have the school take a more intentional and school wide approach to teaching reading and writing., The district also allocates funds for each teacher to take one, three-unit course a year at the University of Vermont, which is located about 45 minutes from the school.

The district also has sponsored “Lesson Studies” in reading and math. Each year, there are four lessons in math and four in reading. Groups of teachers in the school are relieved from teaching for the entire day, and with a district reading or math expert,

prepare, teach and then critique lessons on specified topics. However, because of budget constraints, this program might be slimmed in the future.

Currently, the school does not have any instructional coaches and the district does not provide funding for instructional coaches as a normal part of school staff allocations.

The school would like to provide additional professional development but funds have become scarce, and there is concern that even the existing professional development programs might lose funding in the future.

### **School Culture**

The prime focus on school culture for this school is to create a strong academic focus inside the school; the goal is to have a culture that stresses academics – reading, writing and mathematics. The initiatives to lengthen instructional time for these subjects and to change the curriculum for both reading and mathematics have contributed to this new academic press.

This academic focus is reinforced by teachers use of common curriculum units in mathematics, the emerging use of common curriculum units in social studies and science, and the more structured approach to reading program. There is a hope that this academic focus could be further reinforced by the result of teacher work in collaborative teams, which began just this year

The school also has addressed student behavior. A few years ago, a student survey found that they felt safe at school and felt respected by the teachers but not respected by their peers. Thus, the school launched a “Positive Behavior Intervention Supports” program. This program provided teachers with strategies to acknowledge positive student behavior on a more timely basis as a way to engender the behaviors of

respect and to reduce referrals for misbehavior to the principal. The goal was to make it “cool” for students to respect and be nice to each other, and take school seriously.

### **Summary**

Brewster Pierce Elementary School has produced significant improvements in student learning by:

- Setting the continuous improvement of student performance in reading, writing and mathematics as reflected in NECAP scores as its major goal
- Requiring more instructional time core subjects including 90 minutes for reading and 90 minutes for mathematics, as well as an additional 30 minutes for writing every day
- Adopting a strong curriculum and instruction program, which has become “guided reading” with leveled books supplemented by Foundations for reading, and the Investigations program for mathematics supplemented by Fastt Math to reinforce the acquisition of arithmetic facts. The school also encourages its teachers to develop and use common curriculum units in all subjects, including common formative assessments, common instructional activities and common end-of-unit tests. This consistency has been attained for mathematics and is developing in science and social studies.
- Providing early intervention in reading by using the My Sidewalks intervention that emphasizes phonemic awareness and phonics.
- Tracking student progress during the year through multiple monitoring assessments and formative assessments, using the district’s VCAT online state data system

- Providing a comprehensive set of extra help or interventions to struggling students all through the academic year, including a full 30-40 minutes each day during the Intervention Block, as well as an “intervention team” of about 6 individuals who provide additional help in reading and mathematics. Reading interventions include one-to-one tutoring in the early grades, and *Read Naturally* and *Soar to Success* in other grades, with mathematics interventions that include *Math Recovery* and *Do the Math*.
- Using research-based methods for both the core instructional program and various interventions.

The school recognizes more can be done. It wants to dramatically extend the common free periods so there can be more collaborative teacher work, it wants to embed more technology into the ongoing curriculum and instruction program, it wants more professional development, and it is beginning to focus on achievement at higher levels than just “on grade” level.