MAKING DATA WORK:

A PARENT AND COMMUNITY GUIDE

An easy guide to collecting and analyzing school data in order to improve student achievement

**The Education Trust
Washington, DC**

Introduction

Schools all over the country are working to raise achievement for all students and erase the gaps that exist among low-income students, students of color, and their White and more affluent peers. The use of data is a powerful tool in these efforts.

Data help uncover areas that need attention and improvement. Data also let us know when strategies are working or need to be re-evaluated. This guide is designed to help parents and community members learn how to understand and use data to focus and spur improvement efforts. When these two groups work together with our country's dedicated educators to help all students succeed, good things happen.

The guide can be useful to individuals or groups of people who want to know how to use data to understand how their schools are doing and how to go about improving them, especially schools that serve high concentrations of students from low-income families and students of color. Community advocates, school counselors, parents, policymakers, and educators can use this guide to focus their efforts to change their schools for the better.

The Education Trust wishes to thank MetLife Foundation for its support of this project. If you would like additional information on the use of data in school improvement efforts or other Education Trust initiatives, please contact us at 202-293-1217 or visit our Web site at www.edtrust.org.

Table of Contents

Part I – Finding the Truth in Data

Part II - How to Use Data

STEP ONE: Achievement

STEP TWO: Opportunity

STEP THREE: Success

BLANK WORKSHEETS

Part I: Finding the Truth in Data
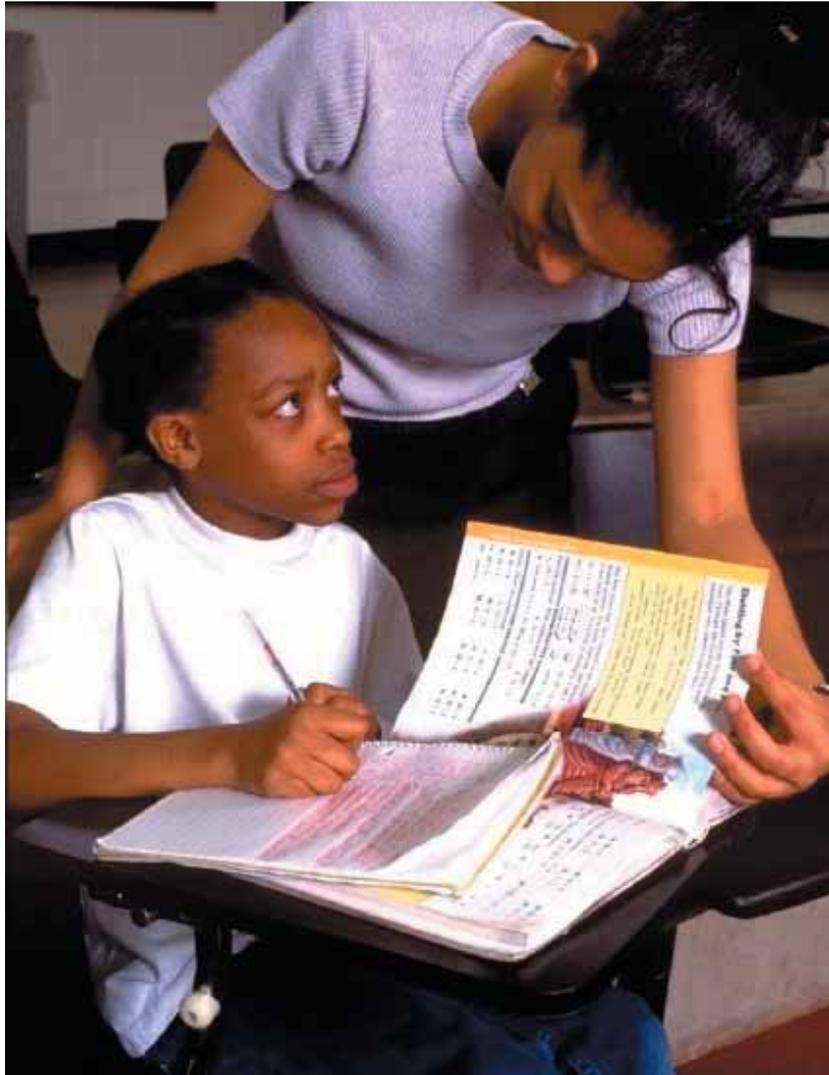
There's a lot that parents and communities can do to help their schools work on behalf of all students. But to improve your schools, you first need to understand what's going on in them. And you need more than stories or impressions. You need facts.

That's where data comes in. Data is a powerful tool. It not only tells you what's happening in your school now, it can help explain why it's happening and show you what good things can happen when educators, parents, and community members work together for the good of all students.

This Parent and Community Guide will show you how to use data to achieve your goals. It will answer the following questions:

1) Why is data important?
2) Where can I get data?
3) How can I use data to understand what's happening in my school/district?
4) How can I use data to improve my school/district?

Why is data important?

Without data, you are just another person with an opinion.

Data is at the heart of any successful school improvement process. Good data can tell you:

- whether students are mastering the skills and knowledge they need to be successful in later grades, in college, and in the workforce
- whether achievement gaps exist between certain groups of students, that is, whether some students are doing well while others are lagging behind
- whether student achievement has been improving or declining over time, and whether achievement gaps between groups have been increasing or decreasing
- whether all students are being provided with the opportunities they need to learn, including qualified teachers, a rigorous curriculum, and adequate resources
- whether other area schools with students like yours are doing well so you can learn from them

Once you have the data to answer these questions, you'll be better prepared to do the hard work of school improvement. You'll be able to explain many of the problems your school is facing. You'll also know more about why those problems exist, and you'll find concrete examples of ways to address them.

Where can I get data?

For years, parents and community members have struggled to get even the most basic data about their schools. Only the most persistent—or the luckiest—could get data about the performance of all students in a school, not just their own child, or the opportunities all students were given to perform well. Many others received data based on overall averages, averages that could mask glaring achievement and opportunity gaps between different groups of students. Some received no data at all.

The No Child Left Behind Act (NCLB) changes this. Under this law, parents and community members have a right to know how all students are achieving and what resources, like qualified teachers, they're given to help them achieve. They have a right to know whether all students, and all groups of students, are meeting state-determined proficiency goals for each year, known as Adequate Yearly Progress (AYP) targets. They also have a right to know whether schools have been identified as "in need of improvement" because they have not met these state goals for two or more consecutive years. In fact, where schools have been identified as needing improvement, parents and community members have an *obligation* to use this achievement and opportunity data to inform the school improvement process.

The section "Know Your Rights: School and District Data Required Under NCLB" on page 6 provides a list of all the data that districts are required to make publicly available in school and district report cards under the federal law. It's a long list, one that includes much of the data that is most important to anyone looking to improve schools. But let's be clear. The data

PART I: Finding the Truth in Data

that districts must report under NCLB is *not* all of the data you'll need. You will also need to know:

- whether all students are being placed in the high-level classes that will help them achieve
- whether certain students are being disproportionately placed in special education programs or being placed out of school altogether through suspension
- whether your district is receiving its fair share of education dollars
- whether other schools in your area are succeeding with students like yours

The Data Resource List on page 41 gives specific suggestions on where to find this important data.

How can I use data to understand what's happening in my school and district?

Finding good data is the first step. The next step is to analyze the data in order to find the answers to your questions about your school. We'll teach you how to do this using simple data collection tables and worksheets.

Once you've found the answers to your questions, you have to communicate your message clearly and effectively to other parents and community members,

educators, school board members, journalists, policymakers, and anyone who needs to hear it. We'll teach you how to convey your message using simple yet effective graphs.

How can I use data to improve my school and district?

This is the hardest part of the process, and the most important. The data you uncover may be difficult, even painful, for people to hear. It may reveal significant differences in achievement and opportunity between students of different races and income levels. It may challenge people's long-held notions about what's going on in their schools. It may even lead some people, those who haven't heard all the facts, to incorrectly place the responsibility for the achievement gap on low-income and minority students, rather than on the schools and districts that have failed to give them what they need to be successful.

A clear, accurate and thorough argument, one based on the data, is the only way to communicate the truth about our schools, the truth about who's learning and who's being denied the opportunity to learn. Knowing the truth is the only way we can begin to improve.

Throughout this Guide, we will present examples of how parents and community members just like you have used their experience with data to close gaps and improve achievement for all students.

If you're nervous about presenting your findings in your community, we can help. Our staff can give you tips over the phone on how to proceed. Or someone can come out to your community to help in person. Give us a call.

Hints for finding the truth in data

Before we start, we offer some lessons that we have learned from our years of working with data to improve schools.

Get a group of people together to work with.

It's easier to do this work with a group of people, for example, parents with children in the same school or a community group concerned about schools in a particular area. Each person will bring their own skills, abilities, and knowledge to the group. And more hands make lighter work.

Keep in mind that there are many community-based organizations already collecting and using data for school improvement. If you can join up with such a group, you can learn from their

expertise and benefit from their resources. They in turn will benefit from your energy and interest in seeing schools educate all students.

Establish clear goals.

Before you start gathering data, your group should have a conversation to find out as much as you can about the schools you are interested in. Try to develop a common understanding of what you are looking for and what you are trying to accomplish. This will save you time and energy, and will improve the quality of your work.

Be persistent.

Sometimes people will tell you they don't have what you are looking for, but that won't always be true. If you know you are in the right place, tell the person that you know you have a right to this information. If you think you might not be in the right place, ask where you can get what you need.

Do your homework.

The more exact you are about the data you're looking for, the easier it will be to get it. Know what data your school or district is required to collect and make public, and get as much data as you can on your own before asking your school or district.

Today, a lot of school data is available on the Internet. The best place to start is the Web site for your state's department of education. Your state's Web site should have state-level data, and should direct you to district and school-level data. You may also be able to find links to the Web sites for local districts or for individual schools. The Data Resource List on page 41 provides the web address for every state department of education as well as other useful data tools. Even if you don't have access to the Internet, you may still find this information through other public means such as the public library.

Keep records.

If you send a request for data in writing, always keep a dated copy so you can prove what you asked for. If you speak to somebody by phone or in person, always ask for his or her name and keep track of it. If that person refers you to someone else, use the referring person's name when you make the next call: "Mr. Jones at Any Town Elementary told me to call you."

Go through the whole process.

This data process is designed to be completed from beginning to end, steps one through three. If you stop partway through, you will not get the full account of what is happening in your school. It's like putting together a jigsaw puzzle. If you don't have all the pieces, you won't see the whole picture, and you might even get the wrong idea about what the picture is really showing.

PART I: Finding the Truth in Data

PART I: Finding the Truth in Data

Check and double-check everything.

If you are going to use your data publicly, you must be accurate. If your data is wrong, no one will take you seriously. Whenever possible, you should use official data provided by the school system or state. If you use data from other sources, make sure that you can verify everything. Have different people on your team check the data. Finally, have someone who was not involved in the data collection and analysis do a final check. Remember to also check your spelling and grammar.

Don't give up.

This work won't be easy, but it needs to be done. All children deserve good schools.

So let's get started!

Know Your Rights: School and District Data Required Under NCLB

The No Child Left Behind Act requires districts to report on student achievement and learning opportunities every year. Reports must be disseminated to all schools in the district and all parents of students attending these schools. They must be made available widely through public means, such as posting on the Internet, distribution to the media, and distribution through public agencies. They must be in an understandable and uniform format and, to the extent practicable, provided in a language that the parents can understand.[1]

District report cards must contain the following information for the district as a whole and for individual schools:

Achievement

- The overall percentage of students meeting state proficiency standards
- The percentage of students meeting state standards reported separately by race/ethnicity, income, disability status, and English proficiency[2]
- A comparison between state-wide achievement goals and the actual achievement of each group of students
- The percentage of students in each group who did not participate in achievement tests
- A comparison between the achievement of each group of students at the school, district, and state levels
- A comparison of the current year's assessment results to the results from the year before, reported separately for each group of students

Graduation

- The graduation rate for high school students, reported separately for each group of students
- A comparison between the graduation rate of each group of high school students at the school, district, and state levels

Additional Indicators

- The performance of all students on the additional indicator chosen by the state to determine Adequate Yearly Progress (AYP) for elementary and middle schools (most states have chosen to report attendance rates)
- A comparison between the performance of elementary and middle school students on the additional indicator at the school, district, and state levels

Schools in Need of Improvement

- The number and percentage of schools in the district identified as needing improvement[3]
- The name of each school identified as needing improvement and how long each school has been identified

Opportunity

- The professional qualifications of all teachers, as defined by the state[4]
- The percentage of teachers with emergency or provisional credentials
- The percentage of core academic classes not taught by highly qualified teachers
- A comparison of the percentage of core academic classes not taught by highly qualified teachers in high-poverty schools and low-poverty schools

For more information on NCLB, see "Improving Your Schools: A Parent and Community Guide to NCLB" on our Web site at www.edtrust.org, or call us if you need help understanding the law.

Footnotes

[1] Public reporting of data is required under Section 1111(h) of the No Child Left Behind Act.

[2] Reporting is not required when the number of students in a group is too small to give statistically reliable information, or when the results would reveal personally identifiable information about an individual student.

[3] Schools in need of improvement have not met state-wide goals for at least two years in a row.

[4] Professional qualifications might include information on degrees received (i.e. bachelor's, master's) and licensure.

The Data "Message" at a Glance

School and district data will tell you about the quality of public education in your community and shine a light on ways to make sure all students meet high standards. But you must first know what to look for.

We feature national data below to present a snapshot of educational quality in America. The data focuses on three areas that are key to understanding educational quality: overall student achievement and achievement gaps; opportunities to learn; and success stories. The patterns revealed by this data are typical of those found in communities across the country.

The "data message" about your schools can be presented using your own community's data to discover how your schools are doing now and how to make them better.

1 STEP ONE: Achievement

Are students meeting the standards?

The first step to understanding what's happening in your schools is to look at data on overall student achievement. This data will tell you whether students as a whole are meeting the standards for what they should know and be able to do. To get a picture of national student achievement, we'll look at data from the National Assessment of Educational Progress, or NAEP. Known as "the Nation's Report Card," NAEP is an assessment of knowledge and skills given to a representative sample of students in every state.

- Nationally, only 30% of our 4th-grade students are able to read at the proficient level, and a whopping 38% have not been taught even basic reading skills.
- The picture is no better for 8th-grade math: a mere 27% of our 8th-grade students can do math at the proficient level, while 33% do not have even basic math skills.

NAEP 4th Grade Reading
All Students, 2003

Percent of Students		
Proficient/Advanced	30	
Basic	32	
Below Basic	38	
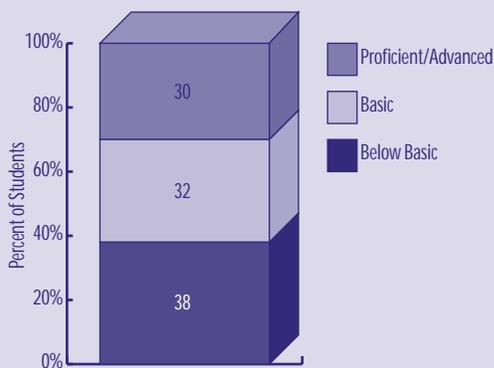
NAEP 8th Grade Math
All Students, 2003
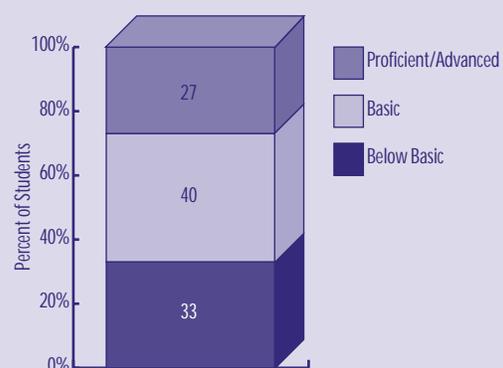
Percent of Students		
Proficient/Advanced	27	
Basic	40	
Below Basic	33	

Source: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP) Summary Data Tables. http://www.nces.ed.gov

The Data "Message" at a Glance

The Data "Message" at a Glance

Are there achievement gaps between groups of students?

Data on overall achievement is important. However, to get the whole story, you need to look at the achievement of different groups of students to see whether some groups are consistently performing better than others. Again, we'll look at NAEP data to get the national picture.

- Nationally there is a significant gap between the achievement of White students and their minority peers. While 36% of White 8th-graders are able to do math at the proficient level, only 7% of African American 8th-graders, and 11% of Latino 8th-graders, are meeting the standard for proficiency.
- There is also a gap between the achievement of low-income students and their more affluent peers. Only 15% of low-income 4th graders are able to read at the proficient level, compared to 41% of their more affluent peers.

Overall, we have made slow progress in closing these gaps in recent years. The national achievement gap between White high school students and their minority peers actually increased in both reading and math during the 1990s.

NAEP 8th Grade Math by Race/Ethnicity, 2003

Percent of Students

Race/Ethnicity	Below Basic	Basic	Proficient/Advanced
African American	61	32	7
Latino	53	36	11
Native American	46	38	16
White	21	43	36
Asian	23	35	42

NAEP 4th Grade Reading by Family Income, 2003

Percent of Students

Family Income	Below Basic	Basic	Proficient/Advanced
Poor	56	29	15
Not Poor	25	34	41

Source: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP) Summary Data Tables. http://www.nces.ed.gov

After 1988, Gaps Mostly Widen
NAEP Reading, 17 Year-Olds

Average Scale Score

21

29

White
Latino
African American

1971 1975 1980 1984 1988 1990 1992 1994 1996 1999 2004

After 1990, Gaps Mostly Widen
NAEP Math, 17 Year-Olds

Average Scale Score

20

28

White
Latino
African American

1973 1978 1982 1986 1990 1992 1994 1996 1999 2004

Source: US Department of Education, National Center for Education Statistics. *NAEP 2004 Trends in Academic Progress*

2 STEP TWO: Opportunity

Do all students have sufficient opportunities to learn in school?

If you've identified achievement gaps, you need to ask why they exist. Many people assume that poverty and family problems prevent minority and low-income students from achieving at high levels. While these students may face more challenges outside of school, the sad fact is that they get less in school too. National data shows that the educational system overall gives minority and low-income students the fewest opportunities to learn and the least access to the important factors that contribute to academic success. When schools and districts provide these opportunities, student achievement rises and gaps narrow.

- Nationally, White high school graduates are far more likely to have been enrolled in a rigorous college-prep curriculum than their African-American, Latino, and Native American peers.
- Poor and minority students are more likely to be assigned to teachers lacking a major or minor in the field they're teaching than their White and more affluent peers.

African American, Latino and Native American High School Graduates Are Less Likely to Have Completed a College Prep Curriculum

Percent in College Prep

African American	Asian	Latino	Native American	White
25	46	22	21	39
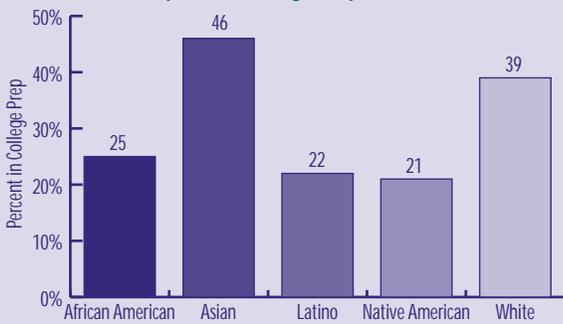
Source: Jay P. Greene, Public High School Graduation and College Readiness Rates in the United States, Manhattan Institute, September 2003. Table 8. 2001 High School Graduates with College Prep Curriculum.

Poor and Minority Students Get More Underqualified* Teachers

Percent of Classes Taught by Underqualified Teachers

High-Poverty Schools	Low-Poverty Schools	High-Minority Schools	Low-Minority Schools
34	19	29	21
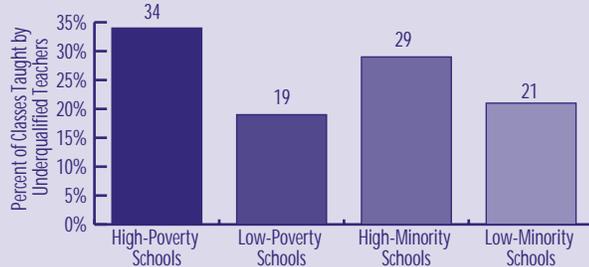
*Secondary teachers lacking a major or minor in the subject they're teaching "High" and "low" refer to top and bottom quartiles

Source: U.S. Department of Education, National Center for Education Statistics, 1999-2000 Schools and Staffing Survey. Calculations by Richard Ingersoll, University of Georgia.

The Data "Message" at a Glance

The Data "Message" at a Glance

3 STEP THREE: Success

Where are schools succeeding with ALL students?

Across the country, there are schools and districts that are successfully closing gaps and educating low-income and minority students to high standards.

- West Jasper Elementary in Jasper, Alabama is a racially diverse, predominantly low-income school. All groups of students at West Jasper are achieving at high levels.
- Boston Public Schools educate many low-income and minority students. Boston's high schools have made considerable progress getting their students to pass the state's high-level graduation exam with African-American and Latino students showing the most gains.
- Centennial Place Elementary is a high-poverty, mostly African-American school in Atlanta. Almost all of the school's 4th-graders are reading at the proficient level.
- The Charlotte-Mecklenburg school district in North Carolina has made significant gains in mathematics achievement for all students and has narrowed the gaps between White and African-American students by half in recent years.

The Education Trust's online data tool, Dispelling the Myth, available at www.edtrust.org, contains high achieving schools in almost every state. Look for schools in your community and your state that are succeeding with all students and share these lessons so that all schools can truly become places where every child meets high standards of learning.

Closing Gaps at West Jasper
**2004 Grade 4 Reading**

Percent Proficient

African American	94
White	100
Poor	100
Non Poor	90
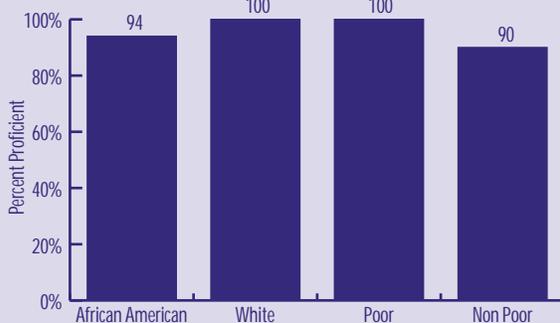
Source: Alabama Department of Education, http://www.alsde.edu

Boston Public Schools
Great Gains in 10th Grade Competency Rates

Percent of 10th Graders Passing High School Exit Exam on First Attempt

Legend: 2000, 2003

	2000	2003
African American	32	68
Latino	30	61
White	70	91
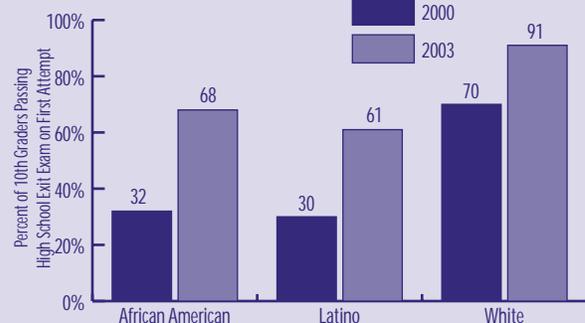
Source: Massachusetts Department of Education, http://www.doe.mass.edu

High Achievement at Centennial Place
2004 Grade 4 Reading

Percent Proficient

All	94
African American	94
Low-Income	92
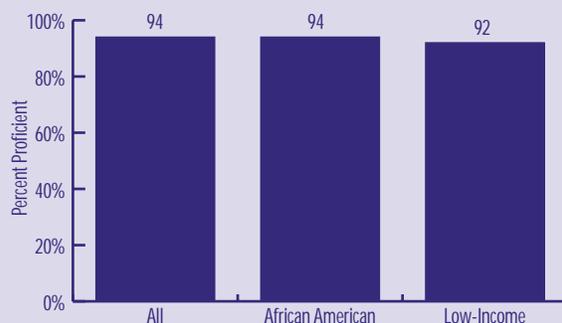
Source: Georgia Department of Education, http://www.doe.k12.ga.us

Charlotte-Mecklenburg, North Carolina
Raising Achievement, Closing Gaps 3rd Grade Math

Percent Proficient

40 ... 17

White, Latino, African American (1998–2004)

Source: North Carolina Department of Public Instruction, http://www.ncpublicschools.org
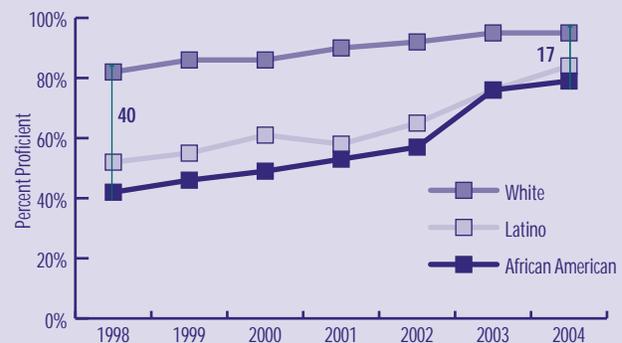
PART II: How to Use Data

A Sample Exercise: Any Town Middle School

We will now go through a series of data collection exercises about an imaginary school called Any Town Middle School (ATMS) that has a racially, ethnically, and economically diverse student body. This exercise will help you learn how to use the blank data collection tables we provide in the last section of this Guide, and to undertake your own data collection and analysis.

We have organized the data collection into three steps: Achievement, Opportunity, and Success. Information about all three is necessary to get a complete picture of how your school is performing and how to improve it. Each step is introduced with a short scenario featuring a group of Any Town parents who are learning how to use data to encourage school improvement efforts at Any Town Middle School.

We have included several graphs to illustrate the data. These are to give you an idea of how you can use and display your data so your audience can easily understand your presentation.

Step One

How Parents in Any Town Learned About Achievement Gaps

Step One

A group of parents was contacted by the principal from Any Town Middle School (ATMS) to serve on the School Improvement Team because the state cited their school as "needing improvement." The law, called the No Child Left Behind Act, requires schools in need of improvement to involve both parents and teachers on a committee to develop a school improvement plan. However, the Any Town parents feel like they're only on the committee to comply with the federal regulations, and that the school really doesn't want their advice. To add to their frustrations, the parents don't understand the new law and feel lost in the discussions about achievement data.

Some of the parents have been concerned about how their kids are achieving for a long time, but they don't have the proper information to back up their concerns. They have also heard that there are big differences in how African-American, White and Latino students perform on tests. Yet, other parents are very surprised to hear that there are problems, and resent that their school has been designated as "needing improvement." The local paper ran a story that said the school has one year to improve or something will happen, but they're not sure what.

The parents sought help from Save the Any Town Schools (SATS), a local community-based organization that works with advocates, parents, educators and businesses to improve the quality of public education in their community. They wanted to understand the No Child Left Behind law that their principal mentioned and how they could use it to improve their schools. The first thing SATS told them was that the district was required by law to provide data about ATMS to the public, including data on how each group of students in the school was performing. Using the Community Data Guide, SATS members helped the parents compile and analyze achievement data in reading and mathematics at Any Town Middle School.

By completing Step One of the Data Guide, the parents learned the following facts about students' achievement at Any Town Middle School:

- Only 30% of ATMS' 8th-graders were performing math at the proficient level or better.
- White students overall were doing better than other groups of students.
- Over the last three years, Latino and African-American students' achievement improved, but the gap with White students remained large.

The picture that emerged from the data indicated that overall school performance was lackluster. A relatively small percentage of students were performing at proficient levels. There were gaps between White students and students of color, and the performance of low-income, limited-English proficient (LEP) and special education students lagged behind the performance of the overall population. Some parents worried that the data would reinforce stereotypes but after some discussion, they were convinced that the only way to improve the school was to speak honestly about the data, even if it wasn't a pretty picture. Above and beyond everything else, the purpose was to improve academic results. The data they collected not only told what was going on academically, it raised questions about why the achievement gaps existed. By staying focused and proceeding to Step Two in the Data Guide, the parents were getting closer to the answers they sought.

STEP ONE: Achievement

Are students meeting standards?

Test results provide feedback to parents, students and their teachers on whether students know and are able to do what is necessary to meet state standards for proficiency. When students perform below the proficient level, this is a clear sign that schools need to alter their instruction or otherwise intervene to help those students.

States have different testing policies, but they all test their students in at least some subjects and at different grade levels. Under No Child Left Behind, results from state reading and math tests must be broken down by race/ethnicity, poverty, disabled status, and limited-English proficiency and must be made public in school and district report cards. By 2005-06, all students will take state reading and math tests at least once a year in grades 3-8, and at least once during grades 10-12. By 2007-08, they will also take state science tests at least once during elementary, middle, and high school. (For more information, see "Improving Your Schools: A Parent and Community Guide to NCLB" on our Web site at www.edtrust.org.)

Overall test scores

To begin our data collection, we will look at overall test scores. These scores show the average performance of all students in the school on a particular test. Overall scores are commonly used to compare schools, and they can provide valuable information when all students in a school are members of the same racial/ethnic or income group. However, overall scores cannot tell you much about what is happening to different groups of students within the school. We will focus on that later.

To start your analysis, you should select a test (in some places there might be more than one test), a subject, and a grade or level (elementary, middle, or high school) that you would like to look at. In some states, you will find school report cards that give achievement data for one or more individual grades. For example, your school report card might give separate achievement data for grade 6, grade 7, and grade 8. In other states, you will find that your report cards give "composite" data, which reflects all the different grades tested. For example, a report card for a middle school may give only one set of data, but that data will reflect the combined scores for grade 6, grade 7, and grade 8 (See sidebar "Two Ways of Reporting Data").

Two Ways of Reporting Data

To explain the difference between data for individual grades and composite data, we will create an imaginary school, Lucky Middle School, and put it in two different states, one state that reports data for individual grades and another state that reports composite data. Lucky Middle School has a grade 6 class, a grade 7 class, and a grade 8 class. All 6th graders take a grade 6 reading test, all 7th graders take a grade 7 reading test, and all 8th-graders take a grade 8 reading test.

If Lucky Middle School is in a state that reports data for each individual grade, the reading data on its report card would look like this:

Class	% Proficient
Grade 6	82%
Grade 7	65%
Grade 8	70%

If Lucky Middle School is in a state that reports composite data, the reading data on its report card would look like this:

	% Proficient
Lucky Middle School	72%

Remember that in both cases, the data we have presented is for the same students in the same school. The 72% reported if Lucky Middle School is in a state that reports composite data is an average of the reading scores of each of the three classes (If each grade had the same number of students, this is what the calculation would look like: 82%+65%+70%=217. 217/3=72%).

You can do the same kind of analysis with composite data that you can with data from individual grades. However, if your school report card gives composite data and you want to see data for a specific grade (for example, the grade your child is in), you should ask your school or district to provide you with this data.

You can repeat the process we're about to go through for different tests, subjects, and/or grades/levels. We have chosen 8th-grade mathematics scores on the imaginary Any State Achievement Test. As much as possible, we will continue to use the same test, subject, and grade throughout this exercise.

Table 1 shows the percentage of students at various achievement levels. Each state has its own unique system of reporting student achievement results. Your state may use other terminology to describe levels of achievement in meeting state standards. Therefore, the data tables given here will most likely need to be modified to reflect the terminology used in your state (See "What's in a Name?" below). Regardless of the names, the principle illustrated here is the same. We have filled in the percentage of students who fall into each achievement level.

Table 1: Overall Test Scores

School: Any Town Middle School
Subject: Math
Grade/Level: 8
Test: Any State Achievement Test
Year: 2004

Achievement Level	Percent of Students
Advanced	6%
Proficient	24%
Basic	40%
Below Basic	30%
TOTAL	100%

Example for reading this table: 6% of Any Town Middle School 8th-graders performed math at the advanced level.

ANALYSIS: Remembering that the ultimate goal is for all students to at least be proficient, we can see that less than one-third, 30%, of the school's 8th-graders have met this standard: that is, 24% of students at the proficient level plus the 6% who perform at the advanced level. Another 30% do not even perform to the basic level. This tells us, very clearly, that while Any Town Middle School is succeeding with some students, they are producing mediocre results with most of them and falling drastically short with others.

What's in a name?

Student test results are reported in achievement levels. These levels are an indication of what students know and are able to do. The ultimate goal of No Child Left Behind is for every student to reach at least a "proficient" level of achievement. "Proficient" can be thought of as "meeting the standard." A student who is proficient knows and is able to do what the state has determined that a student at that grade level *should* know and be able to do. However, each state defines exactly what "proficient" means according to its own standards and the test it administers.

States differ greatly in the terminology they use to report test results. This means that the names for achievement levels vary considerably from state to state. Some might use "Level I," "Level II," and "Level III" while others might use "Unsatisfactory," "Satisfactory," and "Excellent."

In addition, states differ in the number of achievement levels they use. Some identify three while others use six or more levels. NCLB requires states to define achievement in at least *three* achievement levels:

- One equivalent to *"advanced"* achievement
- One equivalent to *"proficient"* achievement
- One equivalent to *"basic"* achievement

In this data guide, we will use the following terminology: advanced, proficient, basic and *below basic.* We find this fourth category is very useful for identifying students who have not even been taught to the "basic" level.

Your state's achievement levels should be described on its department of education Web site. The Education Trust staff can also help if you need a clearer understanding of your state's terminology.

EXAMPLE: Bar graph. Below is an example for how to display this data. We use a simple bar graph where the bar represents all of the 8th-graders and each band is the percentage of students performing at each achievement level.

Table 1: Bar Graph: Any Town Middle School 8th-Grade Achievement in Mathematics, Overall, 2004
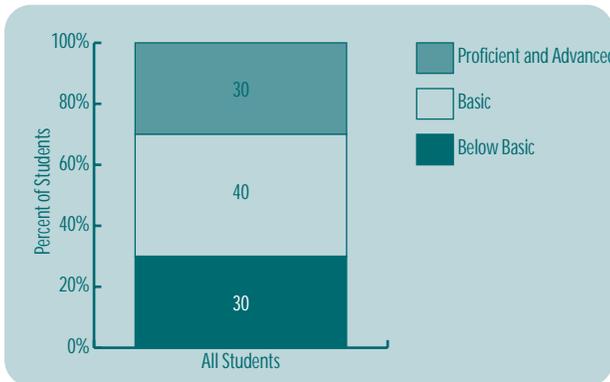
Example for reading this graph: 30% of Any Town Middle School 8th-graders perform math at the proficient or advanced level.

HINT: Most computers today make it very easy to make a graph from a table. If you are unfamiliar with this, consider asking around for help or try a computer class.

NEXT: Let's look further. Is achievement at Any Town Middle School getting better or worse? We will look at how achievement is changing over time.

Overall test scores over time

The adjacent table is the same as the previous one, except we have added space for three years of scores. We have used consecutive years, but you could look at various intervals, for example the most current year, five years ago, ten years ago or any combination you choose, as long as the scores come from the same test. States sometimes change the test they use, and scores from different tests cannot be compared to each other in this type of analysis. You can also make your own table and use more than three different years. Once this table is filled out, you can see if the scores are changing. Are they improving? Getting worse? Staying about the same? We will show you how to use the table to create two different graphs: a "line graph" that will help you visualize progress over time and a "bar graph" that shows change for every achievement level.

Table 2: Overall Test Scores Over Time

School: Any Town Middle School
Subject: Math
Grade/Level: 8
Test: Any State Achievement Test
Years: 2002-2004

Achievement Level	Percent of Students		
	2002	2003	2004
Advanced	1%	4%	6%
Proficient	20%	22%	24%
Basic	37%	39%	40%
Below Basic	42%	35%	30%
TOTAL	100%	100%	100%

Example for reading this table: In 2004, 6% of Any Town Middle School 8th-graders performed math at the advanced level. This is an increase from 2002, when only 1% of 8th-graders performed math at the advanced level.

Step One

ANALYSIS: Earlier we saw that Any Town Middle School was producing inadequate results: only 30% of its students were achieving at the proficient level or better. But looking at the data for the last three years, we see some good news. Any Town Middle School is improving the achievement of its students. Between 2002 and 2004, it increased the number of 8th-graders performing math at the proficient level from 20% to 24%, and at the advanced level from 1% to 6%. It made even more progress among the lowest achieving students: in 2002, 42% of the 8th-graders were not even performing up to the basic level. By 2004, only 30% of the students were in that group, meaning that more students were performing at the basic level or better.

EXAMPLE: Line graph. Here we display growth in the number of students meeting the proficient level or better. Because we want to draw people's attention to how many students are at least meeting the state standard, or "proficient," we have added together the numbers for proficient and advanced. You, of course, may choose to display these numbers separately.

Table 2: Line Graph: Any Town Middle School 8th-Graders at Proficient or Above in Mathematics, Overall, 2002-2004
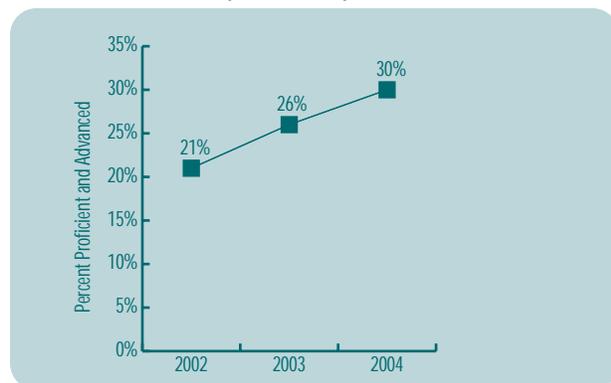
Example for reading this graph: The percentage of 8th-grade math students performing at the proficient level or better increased from 21% to 30% between 2002 and 2004.

EXAMPLE 2: Bar graph. The line graph shown above shows the increase in the percentage of Any Town's 8th-graders who

meet state standards, or the proficient level, in mathematics. But it doesn't tell us much about what, if anything, is happening to the majority of students who still perform below the state standard. The bar graph, shown below, allows us to look at the percentage of students in each achievement level for each year. In this graph, we still see that student achievement at the proficient and advanced level is increasing overall. But we can also see that there are fewer students at the lowest achievement level, or below basic, in 2004 than in 2002. This means the lowest performers were making gains.

Table 2: Bar Graph: Any Town Middle School 8th-Grade Achievement in Mathematics, Overall, 2002-2004


Example for reading this graph: The percentage of 8th-grade math students performing at the proficient level or better increased from 21% to 30% between 2002 and 2004. During this same time, the percentage of 8th-graders performing below the basic level decreased from 42% to 30%.

NEXT: Now we will start to break down our data by racial/ethnic group and by income level. This is called "disaggregated" data.

Are there achievement gaps between groups of students?

As we saw in the first example, overall test scores can tell us a lot about school performance, especially if all students in the school are from the same racial or income group. But they do not tell us how different groups of students are performing. Because a single overall score is an average, it can conceal large achievement gaps between groups of students.

NCLB requires schools and districts to report how all groups of students are achieving. You can now get achievement data by race, poverty level, disabled status and limited-English proficiency (LEP), and see if there are achievement gaps among these different groups.

Please note that you may not find data for every group in your school. It could be because there are no students in that group enrolled in your school. Or there may be only a few students of a particular group, in which case the school is exempt from publicly reporting their scores to protect these students' privacy. If you have questions about why there isn't data for a particular group, you should ask your school.

Before we go on, we need to point out that many people, and perhaps people in your community, won't be surprised to discover achievement gaps separating low-income and minority students from their peers. Achievement gaps have become so familiar to so many that we risk accepting them, thinking that they're inevitable, and maybe even placing the blame on the low-achieving students themselves. It is important to always remember that these gaps are not inevitable. All students can achieve to high standards, and it is the responsibility of schools and districts to do what's necessary to make sure this happens.

The exercises in this Data Guide will uncover achievement gaps that may exist in your school. It will also lead you to find out what school factors may be contributing to these gaps. Knowing what these factors are is the first step to ensuring that your school serves all of its students.

Lost in the Averages

In diverse schools, overall test scores can hide more than they reveal. Consider this real-life example. In a racially and economically diverse middle school in Florida, 52% of students overall met the proficient level on the state test—enough to earn the school an "A" under Florida's system of rating schools. However, when the scores were disaggregated by race and family income, a very different story emerged. The 52% overall pass rate masked a wide range of performance between different groups. While 90% of the school's White students scored at proficient, only 22% of its African-American and 22% of its low-income students scored at proficient. The "A" rating for the school's overall score hid the fact that this school was failing to educate a significant proportion of its students.

The overall performance in this Florida school earns the state's "A" ranking, but it hides a large achievement gap between groups of students.

Achievement Gaps at One "A" School in Florida

Bar chart — Percent Proficient:
- All: 52
- African American: 22
- White: 90
- Low-Income: 22

Source: School Information Partnership, http://www.schoolresults.org

Step One

Step One
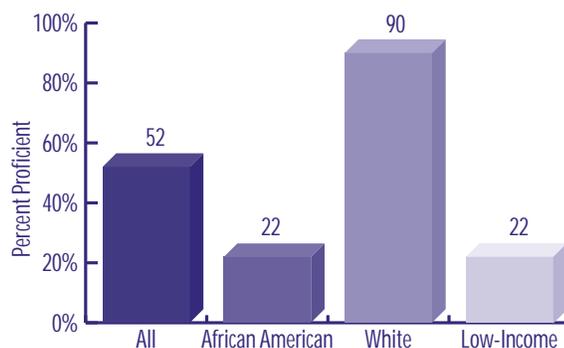
Test scores by race and ethnic group

We will first look at test scores broken down by race and ethnicity. With disaggregated scores, you can compare the different groups to each other and to the overall average to uncover possible achievement gaps in your school.

Again, you need to choose a test, subject, and grade/level to examine, and you will have to fill in your own state's terms for how test results are reported. We will stay with Any Town Middle School. You can copy the blank table provided in the last section of this Guide and repeat it for different tests, subjects, and grades/levels.

Table 3: Test Scores by Race and Ethnic Group

School: Any Town Middle School
Subject: Math
Grade/Level: 8
Test: Any State Achievement Test
Year: 2004

| Achievement Level	Percent of Students			
	African American	Latino	White	Overall
Advanced	2%	3%	8%	6%
Proficient	15%	18%	33%	24%
Basic	37%	36%	42%	40%
Below Basic	46%	43%	17%	30%
TOTAL	100%	100%	100%	100%

Example for reading this table: 2% of African-American, 3% of Latino and 8% of White 8th-graders perform math at the advanced level.

ANALYSIS: In this table, there are obvious differences among different racial/ethnic

groups. African-American and Latino 8th-graders are lagging behind their White schoolmates at the high levels of achievement, and are far more likely to score at the lowest level. White students are twice as likely to score at the proficient level or better than African-American and Latino students: 41% of White students perform at the proficient level or better compared to 17% of African-American and 21% of Latino 8th-graders. White students are also far less likely to perform below the basic level than their African-American and Latino peers.

EXAMPLE: Bar graph. Bar graphs will allow us to display several data points, in this case, to show achievement gaps between groups at Any Town Middle School.

Table 3: Bar Graph: Any Town Middle School 8th-Grade Achievement in Mathematics by Race and Ethnicity, 2004
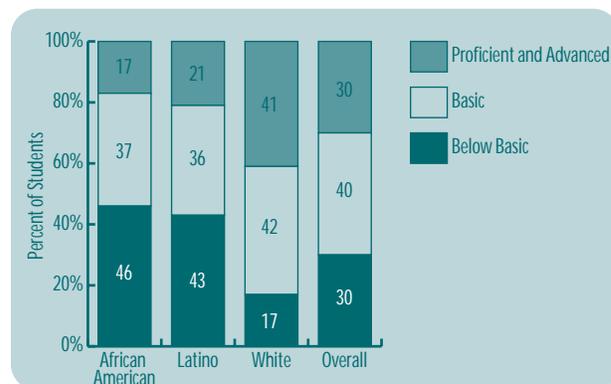
Example for reading this graph: 17% of African American and 21% of Latino 8th-graders do math at the proficient level or better, compared to 41% of their White peers.

NEXT: Now we will do the same type of analysis, except using income level instead of race/ethnicity.

Test scores by income level

Achievement gaps are often present between low-income students and their more affluent peers. There are many ways to define low-income, but the method most frequently used by schools, districts, and states is eligibility

for the free or reduced-price lunch program. The achievement of low-income students as a group should be listed on all school report cards. While in most places you will not be able to make direct comparisons between the

scores of low-income students and the scores of their more affluent peers, you can compare the scores of low-income students to the school's overall scores. If the low-income scores are significantly lower than the overall scores, this signals that there is an income-based achievement gap in your school.

Table 4: Test Scores by Income Level

School: Any Town Middle School
Subject: Math
Grade/Level: 8
**Test:** Any State Achievement Test
Year: 2004

Achievement Level	Percent of Students	
	Low-income	Overall
Advanced	1%	6%
Proficient	12%	24%
Basic	36%	40%
Below Basic	51%	30%
Total	100%	100%

Example for reading this table: 1% of low-income 8th-graders do math at the advanced level compared to 6% of students overall.

ANALYSIS: There is a gap between the scores of low-income 8th-graders and the school's overall scores. Half of the low-income students (51%) have not been taught to do math at the basic level, compared to 30% of all students.

EXAMPLE: Bar graph. We will adapt the bar graph that we used earlier for achievement by race and ethnicity.

Table 4: Bar Graph: Any Town Middle School 8th-Grade Achievement in Mathematics by Family Income, 2004

Example for reading this graph: 13% of low-income students do math at the proficient level or better, compared to 30% of students overall.

NEXT: NCLB also requires schools to report scores by limited-English proficiency (LEP) and enrollment in special education. We will look at these next.

Step One
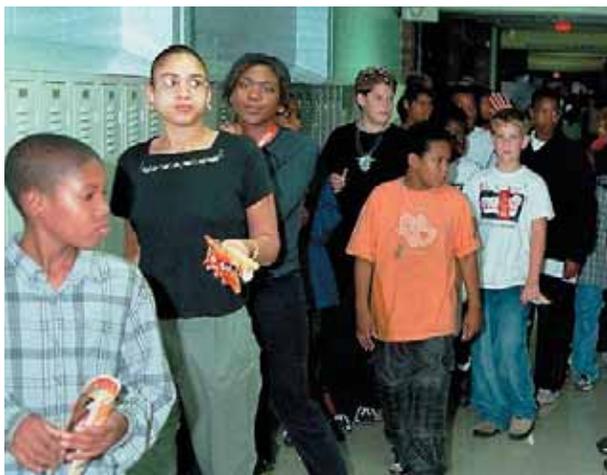
Test scores by limited-English proficiency and special education

We will continue to look at 8th-grade math scores for Any Town Middle School, this time broken down by LEP and special education. As with scores for low-income students, you will likely not be able to compare the scores of LEP students to non-LEP students, or special education students to non-special education students. However, comparisons of the scores of these groups to overall scores can again signal whether these students are falling behind their classmates.

Table 5: Test Scores by English Proficiency and Special Education Enrollments

School: Any Town Middle School

Subject: Math

Grade/Level: 8

Test: Any State Achievement Test

Year: 2004

Achievement Level	Percent of Students		
	LEP	Special Education	Overall
Advanced	2%	0%	6%
Proficient	13%	5%	24%
Basic	33%	25%	40%
Below Basic	52%	70%	30%
Total	100%	100%	100%

Example for reading this table: 2% of limited-English proficient 8th-graders do math at the advanced level compared to 6% of students overall. No special education students do math at the advanced level.

ANALYSIS: The achievement gaps between students of different races, ethnicities, and family incomes are repeated in the data for LEP and special education students. More than half of these students cannot even do math at the basic level: 52% of LEP and 70% of special education students score below basic, compared to 30% of students overall.

EXAMPLE: Bar graph. A bar graph of Table 5 looks like this:

Table 5: Bar Graph: Any Town Middle School 8th-Grade Achievement in Mathematics by Limited English Proficiency and Special Education, 2004
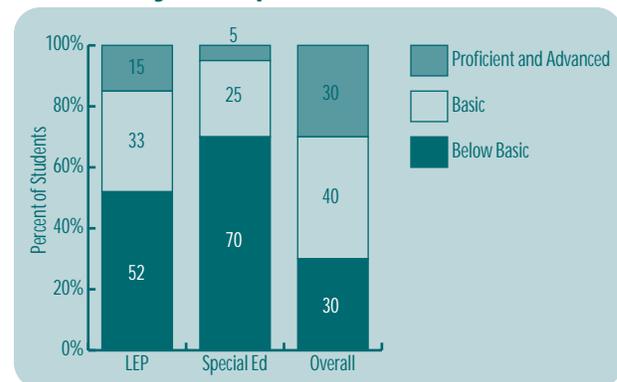
Example for reading this graph: 15% of LEP and 5% of special education 8th-graders do math at the proficient level or above, compared to 30% of 8th-graders overall.

NEXT: Just as we looked at overall achievement over time, we will now look at disaggregated data over time to see if the achievement gaps at ATMS have increased, decreased or stayed the same.

Test scores by group over time

In this example, we will look at how different racial and ethnic groups are performing over time. Are African-American and Latino test scores improving? Are they improving faster or slower than Whites? You may also choose to use this same table to track test score changes for low-income, LEP, or special education students.

HINT: You should know that in some states you will not be able to get disaggregated test scores from before the 2002-03 school year. Before that year, some states did not report disaggregated data, but because of No Child Left Behind, parents and community members in every state will now have disaggregated achievement data for every school, every year from 2002-03 on.

This table is the same as Table 3, except that there is space for different years. Again, you can use any combination of years that you want, provided that the scores are from the same test.

Table 6: Test Scores by Race and Ethnic Group Over Time

School: Any Town Middle School
Subject: Math
Grade/Level: 8
Test: Any State Achievement Test
Year: 2002-2004

| Achievement Level	Percent of Students								
	African American			Latino			White		
	2002	2003	2004	2002	2003	2004	2002	2003	2004
Advanced	0%	0%	2%	0%	0%	3%	2%	4%	8%
Proficient	7%	11%	15%	5%	6%	18%	14%	24%	33%
Basic	31%	32%	37%	30%	34%	36%	41%	41%	42%
Below Basic	62%	57%	46%	65%	59%	43%	43%	31%	17%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Example for reading this table: Between 2002 and 2004, the percent of African-American 8th-graders scoring at the advanced level increased from 0% to 2%. During this same time period, the percent of White students scoring at the advanced level increased from 2% to 8%.

ANALYSIS: There is a lot of information here to process. All groups of 8th-graders are improving. For example, in 2002 only 7% of African-American students and 16% of White students scored at the proficient or advanced level. By 2004, 17% of African Americans and 41% of White students scored at this level. This is good news for ATMS. However, in order to close the gap, the scores of African-American students would have had to increase more rapidly than the scores of White students, and this has not happened. In 2002, there was a gap of 9 percentage points between African American and White students who performed at proficient or better. In 2004, that gap had increased to 24 percentage points. A similar gap exists between Latino and White students.

EXAMPLE: Line graph. A line graph will allow us to show change over time for more than one group. Our example focuses attention on students achieving at proficient or better because our overriding goal is for all students to at least perform at the proficient level. In this case, increasing numbers means positive change in the school. However, you could also choose to look at change by graphing the percentage of students in the lowest achievement level.

Table 6: Line Graph: Any Town Middle School 8th-Graders at Proficient or Above in Mathematics by Race and Ethnic Group, 2001-2003
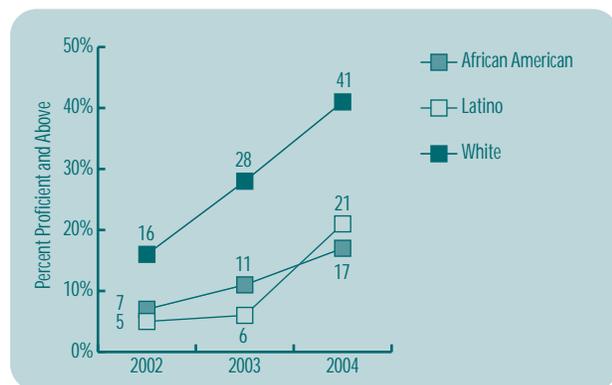
Example for reading this graph: Between 2001 and 2003, the percent of Latino 8th-graders scoring at the proficient level or above increased from 5% to 21%.

NEXT: We will now leave Any Town Middle School for a little while and look at another way to think about student achievement: high school graduation.

Step One

Step One

Student advancement through the school system

NCLB requires high schools to report their graduation rates to the public. Like test scores, the graduation rate must be reported for all groups of students.

For our analysis of high school graduation, we will look at data from Any Town High School, focusing on graduation rates by race and ethnicity from 2001 to 2004. This will allow us to see whether graduation rates are increasing or decreasing, and whether gaps between groups are narrowing or widening.

Again, in some states you will not be able to get disaggregated graduation rates prior to 2002-03. However, because of NCLB, you should have access to them from 2002-03 and beyond.

Table 7: High School Graduation Rates by Race and Ethnicity

**School:** Any Town High School
Year: 2001-2004

	Graduation Rates				
Year	African American	Asian	Latino	White	Overall
2004	76%	92%	74%	88%	81%
2003	74%	92%	71%	87%	79%
2002	70%	90%	68%	85%	76%
2001	69%	90%	66%	85%	75%

Example for reading this table: In 2004, the graduation rate at Any Town High School was 76% for African-American students. In 2001, the graduation rate for African-American students was 69%.

ANALYSIS: While Any Town High School has been successful in raising graduation rates for all students over time, there are still large gaps between groups. Almost one in four African-American and Latino students did not graduate with their classmates in 2004.

EXAMPLE: Line graph. We will again use a simple line graph in order to highlight both changes over time and gaps between groups.

Table 7: Line Graph: Any Town High School Graduation Rates by Race and Ethnicity, 2001-2004
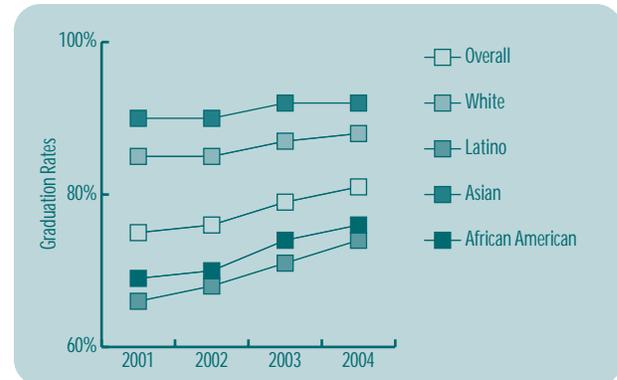
Example for reading this graph: Graduation rates for all groups of students have increased between 2001 and 2004, but gaps between groups remain large.

At this point, it is important to note that states decide what formulas to use to calculate graduation rates. It is crucial that states use formulas that give an accurate representation of how many students successfully move through their high schools and leave with a diploma. Some states are doing this. But many other states are using formulas that are misleading and can give the impression that more students are graduating than really are. For example, some states only calculate and report the percentage of *12th-graders* who earn a diploma at the end of that year. Such calculations completely exclude all students who had already left school in the 9th, 10th, and 11th grades, including those who dropped out. It is important that parents and advocates understand the formula their state uses. Data that comes from dishonest calculations can be worse than no data at all. It can send the message that there is no problem with high school graduation when, in fact, there is.

One way to check whether your school or district is providing you with a clear picture of what's going on is to perform a "flow analysis." A flow analysis compares the number of 9th-graders in a school to the number of graduates from that school four years later. This will

give you an idea of whether students who entered your school in the 9th grade have stayed in and graduated from your school. Because some students move in and out of schools over the course of four years, this flow analysis will not give you an exact picture of student advancement through the system. But it will give you a sense of whether your school is keeping most of its students in or whether significant numbers of students are leaving. If the data shows a sizable drop in the numbers of students between 9th and 12th grade, you should ask the administrators at your school why. It could be a signal that this school has a drop-out problem.

We will now walk you through a flow analysis for Any Town High School.

Table 8: 9th-Grade Enrollment and High School Graduates by Race/Ethnicity

School: Any Town High School
Years: 2001 and 2004

|	2001 9th-Graders	2004 Graduates	Change (2000 to 2004)
African American	388	198	-190
Asian	68	54	-14
Latino	275	143	-132
White	291	210	-81
Total	1022	605	-417

Example for reading this table: In 2001, there were 388 African-American 9th-graders at Any Town High School. In 2004, there were 198 African-American graduates. That's a decrease of 190 students.

HINT: If possible, you should use the number of *entering* 9th-graders in this analysis. Students are more likely to be held back in the 9th grade than in other grades. This creates what is known as the "9th-grade bubble" in enrollment numbers. Because of this, using total 9th-grade enrollment might overstate the size of the particular 9th-grade class that you want to look at. Using the number of entering 9th-graders will mean that your analysis only includes first-time 9th-graders.

ANALYSIS: By comparing the number of Any Town High School entering 9th-graders in 2001 to the number of Any Town High School graduates in 2004, we see that a shockingly large number of 9th-graders left the school before graduation. Some of these students may have transferred to another school in Any District or moved to another district or state altogether, but this explanation probably would not account for all 417 students. This flow analysis has alerted us to the real possibility that Any Town High School is losing too many of its 9th-graders, and too many of its African-American and Latino 9th-graders in particular, before graduation. This portrays a far different, far more alarming picture than the one presented by the school's official graduation-rate data. The community needs to find out why these pictures are so conflicting.

EXAMPLE: Bar graph. A simple bar graph will highlight the difference between the number of entering 9th-graders at Any Town High School in 2001 and the number of students graduating from the school four years later.

Table 8: Bar Graph: Any Town High School 9th-Graders in 2001 and Graduates in 2004
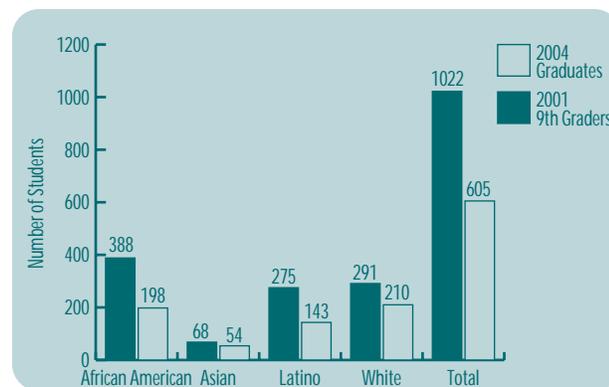
Example for reading this graph: In 2001, there were 275 Latino 9th-graders at Any Town High School. Four years later, there were only 143 Latino graduates from the school.

NEXT: Knowing that there are achievement and graduation gaps is only half the story. You need to find out why these gaps exist. In the next section, we will look at what opportunities to learn Any Town Middle School offers its students. We will focus on opportunity in three key areas: rigorous curriculum, qualified teacher, and funds.

Step One

How Any Town Parents Found an Opportunity Gap in their School

Step Two

The Any Town Middle School parents went to the school improvement meeting called by their principal with the data they compiled and analyzed with the community-based organization Save Any Town Schools (SATS). The teachers and administrators there said they were not surprised at what the parents had learned. Although they hadn't known the extent of the achievement gap, they were aware that minority students, special education students, and limited-English proficient students weren't doing well on tests. They said that these gaps are in many ways expected because these students were from the poorest homes with the least parental involvement and many other social problems that hinder children's ability to do well in school.

The parents were perplexed, but not discouraged, and planned on taking this information back to SATS in order to complete Step Two of the Data Guide.

At their next SATS meeting, the parents reported what the school staff said about the achievement data. The SATS advisers were aware that many people attributed the gap solely to the factors outside of the school. But they went on to explain that while poverty and social problems could not, and should not, be overlooked, there were other factors that contributed to the achievement gap inside of schools – factors that can overcome the effects of poverty and that the schools have the power to influence.

The SATS advisers showed the parents data from middle schools with **similar populations** as that of Any Town Middle School where students were achieving at high levels. They learned about what made a difference in those schools. First, virtually all students had access to the same rigorous curriculum and students who were lagging behind received extra help outside of their regular class time. Special education students were also expected to meet the standards, although there were appropriate accommodations for their respective disabilities. The parents learned that most of the faculty had training in the academic areas they were teaching.

These factors led the parents to continue looking for data about Any Town Middle School. However, data collection for Step Two presented challenges. Because of NCLB requirements, the achievement data was fairly easy to get. NCLB further requires states to define teacher quality and report on the qualifications of their teachers to the public. But information on student course-taking and curriculum rigor are not required and were proving harder to find.

Nonetheless, the parents found out that, compared to the other middle schools in the town, ATMS had many more inexperienced teachers and fewer teachers with degrees in the subjects they were teaching. Was a pattern emerging? The parents decided to find out for themselves.

At the next school improvement meeting, the parents asked if they could work with the school to get data about student assignments to the advanced math and English courses. They wanted to find out whether all students have equitable access to high-level classes. They also wanted to look at how teachers were assigned.

With help from SATS, the ATMS principal and teachers began to see the advantages of collecting the data and became partners with the parents. Through this partnership, they uncovered disturbing differences in access to rigorous curriculum. They found that the newest teachers were assigned to the students with the greatest needs, and that there appeared to be an identifiable pattern of differential access to resources according to student groups. Although it was tough for the parents and educators to look at, the data provided a clear picture of where problems were and what they needed to work on.

STEP TWO: Opportunity

Do all students have sufficient opportunities to learn in school?

We will concentrate here on three crucial factors that affect how well children are able to meet standards: **curriculum quality, teacher quality, and resource equity.** Keep in mind that these same data collection and analysis tools can be applied to other information as well.

We will again go back to Any Town Middle School and look at 8th grade because around that time, different students begin to be placed in different classes. You can of course choose to look at different grades.

Total school enrollment

We will start by gathering basic information about how many students are enrolled in the school by race and ethnicity, and what percentage of enrollment each group makes up. This information will be useful for comparison when you later collect more detailed data about curriculum quality.

Table 9: Enrollment by Race/Ethnicity and Family Income

School: Any Town Middle School

Grade/Level: 8

Year: 2004

	Number of Students	Percent of Students
African American	180	31%
Latino	175	30%
White	235	39%
TOTAL	590	100%
Low-income*	380	64%

Example for reading this table: 180 of ATMS' 590 8th-graders are African American. The 8th-grade class is 31% African American.

*Low-income percentages include students from all racial/ethnic groups.

HINTS:

- Low-income percentages include students from all racial/ethnic groups.

ANALYSIS: This chart simply tells us the composition of 8th-grade enrollment at Any

Town Middle School according to race, ethnicity, and family income. Any Town Middle School has a mixed student body, with no single racial/ethnic group making up more than half of the students.

EXAMPLE: Pie chart. Pie charts are a good way to show the composition of a school. The whole "pie" represents the entire student body, or 100%, and each "slice" represents a specific group.

Table 9: Pie Chart: Any Town Middle School 8th-Grade Enrollment by Race/Ethnicity, 2004
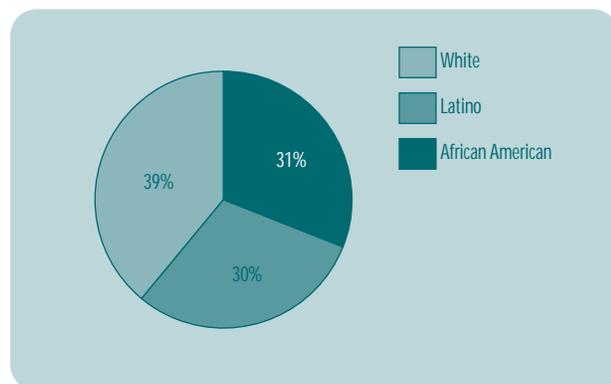
Example for reading this graph: 30% of 8th-graders at ATMS are Latino.

NEXT: We will look at curriculum. What level classes are our students taking?

Step Two

Step Two

Curriculum Quality

To be well-prepared for either college or the workforce, students need to be challenged with a rigorous curriculum from the first day of school. Unfortunately, too many students are put in less challenging classes where they don't develop the skills they need to do well after high school, whether they continue their education or go directly to work (See "College-prep curriculum—It's not just for college anymore!" below).

Indeed, both parents and students know the value of an education today, which is why an unprecedented three-quarters of our new high school graduates are going on to two- and four-year colleges. Yet those who did not have access to a rigorous curriculum in high school often find themselves in "remedial" courses at college, which means they have to re-do what they should have been taught earlier. This is more than just a huge waste of time,

money, and resources; it also affects students' likelihood of graduating from college.

Yet, this could easily be avoided. Many studies have shown that when students are placed in more challenging classes in middle and high school, they learn more and fail less often. (See for example *Thinking K-16*, "A Common Core Curriculum For All," Winter 2003 at www.edtrust.org.)

There are many courses that you could look at to find out if there is equitable access to high-level courses in your school. The example we use on the next page looks specifically at 8th-grade mathematics because the math courses offered in middle school are frequently used as gatekeepers to higher mathematics courses in high school. We will look at enrollments in different 8th-grade math courses by race/ethnicity and compare them to the total 8th-grade enrollments by race/ethnicity.

College-prep curriculum—It's not just for college anymore!

Not too long ago, an individual with basic reading and math skills could step into a manufacturing job that paid a solid middle-income wage. No more. Dramatic changes in the workplace have substantially raised the bar on the skills required for entry-level jobs in a surprising variety of occupations. And the courses once considered important only for young people going to college are turning out to be essential even on the factory floor.

Consider the requirements for entering these "blue-collar" jobs:

- *Telephone Line Installers and Repairers:* algebra and trigonometry.
- *Airplane technicians:* physics, chemistry, advanced mathematics, computers and electronics.
- *Tool and Die Makers:* algebra, geometry, trigonometry and basic statistics.

In addition, a recent survey of human resources personnel from 22 occupations showed that employers of all types are looking for the following skills when hiring young workers;

- strong reading ability, including literature;
- strong writing and research skills; and
- mathematics through algebra II.

Can there be any doubt remaining that all our high-school students need and deserve a college-prep curriculum?

Table 10: Math Curriculum for 8th-Graders by Race/Ethnicity

School: Any Town Middle School

Grade/Level: 8

Year: 2004

8th-graders enrolled in:		General Math	Pre-Algebra	Algebra I	Geometry	Other	TOTAL
African American	Number	86	59	29	2	4	180
	Percent	37%	30%	22%	15%	3%	31%
Latino	Number	75	58	33	3	6	175
	Percent	32%	30%	24%	23%	4%	30%
White	Number	73	77	73	8	4	235
	Percent	31%	40%	54%	62%	3%	39%
TOTAL	Number	234	134	135	13	14	590
	Percent	100%	100%	100%	100%	100%	100%
Low-Income*	Number	182	133	53	4	8	380
	Percent	78%	69%	39%	31%	6%	64%

Example for reading this table: Out of 135 8th-graders enrolled in Algebra I, 29 were African American. African American students made up 22% of all 8th-grade Algebra I students.

*Low-income percentages include students from all racial/ethnic groups.

HINTS:

- Again, the number of students in each racial/ethnic group should add up to the total class enrollment. Keep in mind low-income students are already included in the enrollments by race.

- The courses are listed in the order they are often given in school. Students should be starting Algebra I by the time they reach 8th grade.

ANALYSIS: There is some troubling information here. African-American and Latino students are far less likely to be enrolled in Algebra I or Geometry than their White classmates. For example, African Americans make up 31% of the 8th-grade class, yet they represent only 22% of the students taking Algebra I. On the other hand, White 8th-graders account for 54% of the Algebra I class, even though they are only 39% of the total 8th-grade enrollment. This means that African-American and Latino students are not being given the same opportunity as others to learn challenging mathematics, which is a huge contributor to the achievement gap. If this trend continues through their high school years, they will have less of a chance to get into college, and if they do go to college, there is a greater chance that they will not be prepared to do college-level work.

We want to be clear. There can be legitimate educational reasons for putting together students who seem to be learning at about the same level or the same speed. But such assignments should never be set in stone, and the goal should always be to get all students to reach high standards. If students are placed in lower level math classes at a young age, and are never given the chance to catch up to their peers, the damage can be difficult to overcome.

EXAMPLE: Pie charts. We want to focus here on students' access to high-level subject matter. We will make this easier for our audience to understand by selecting data for the courses that best represent low- and high-level mathematics in 8th grade. So we will show enrollment patterns for general math (low) and Algebra I (high).

Step Two

Step Two

Table 10: Pie Charts: Any Town Middle School 8th-Graders Taking General Math and Algebra I by Race and Ethnicity, 2004

General Math

- White
- Latino
- African American

31%
37%
32%

Algebra I

- White
- Latino
- African American

54%
22%
24%
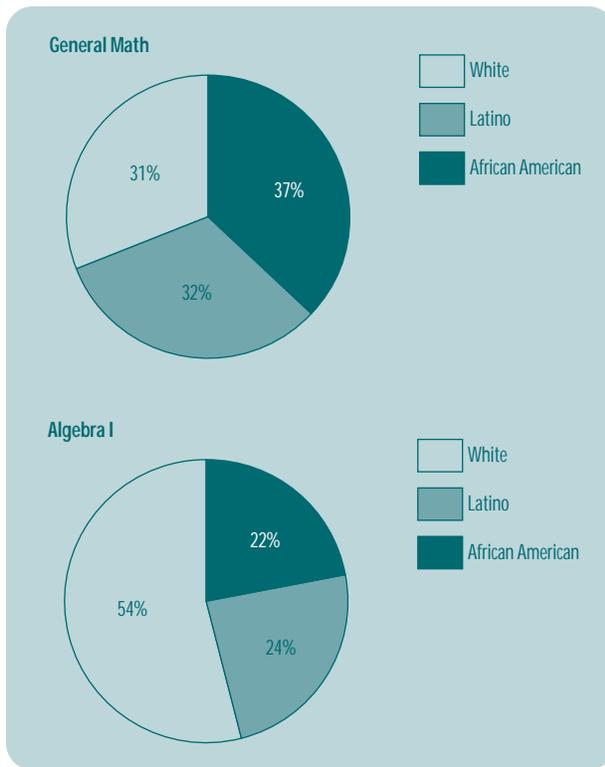
Example for reading this graph: African-American students made up 37% of all students in general math but only 22% of all students in Algebra I.

NEXT: Now we will look at some other ways in which students are separated from each other.
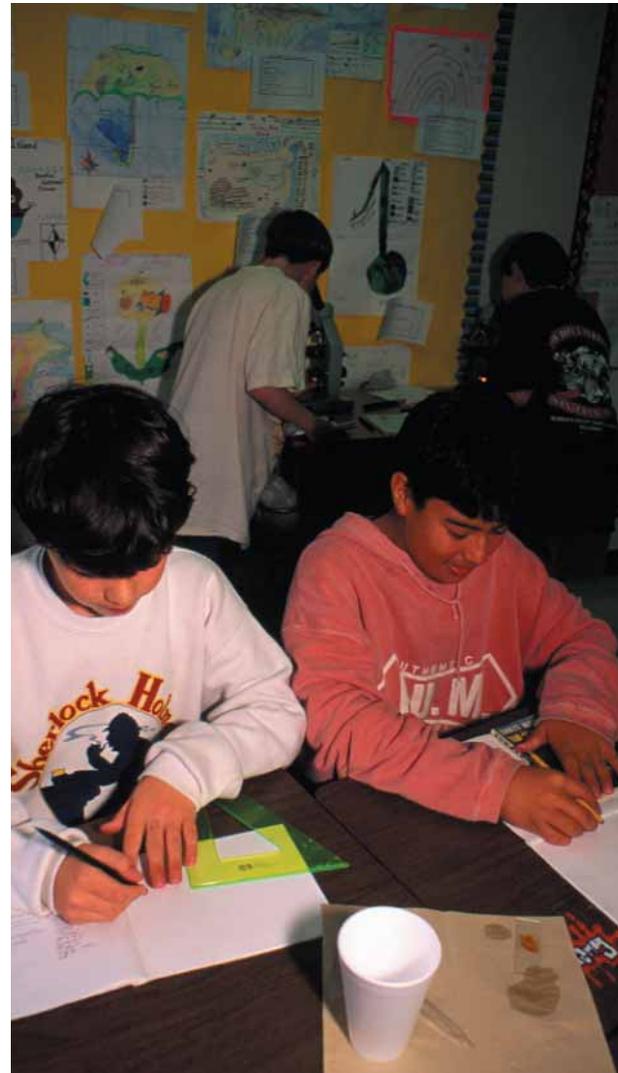
Special Placement

Within any school, students can be divided up in many different ways. The most obvious division is by grade.

But there are other ways students can be divided as well, even within a grade. Some students can be placed in programs for the "gifted and talented." Students with disabilities might be provided with special education services. For many students, suspensions can represent a kind of placement out of school altogether.

Some students need extra help that is not available in traditional classrooms, and special education programs can be a good place to

get that help. Sometimes, however, students are placed in special programs for reasons other than their ability to learn. For example, some students are placed in special education because of behavioral problems, and once they have been labeled as "special ed" it can be very hard to get back into the mainstream.

If your group chooses to look at special education, you should look carefully at the details. Some reasons for placement are clearly apparent, for example, physical handicaps like deafness or severe mental disorders that require special accommodations. Others are not so visible such as mild mental retardation

or learning disabilities. The precise reason for special education placement will have a large impact on what programs are offered, and ultimately will have a large impact on whether or not the identified student is able to access the general curriculum and ultimately get a high school diploma.

Nationally, certain groups tend to be over-represented in some special placements and under-represented in others. African-American students, for example, tend to be over-represented in special education and in suspensions, and under-represented in gifted and talented programs.

To determine patterns of under- or over-representation, we first have to do the same kind of enrollment analysis that we did in Table 10. This time we will look at 8th-grade enrollment compared to enrollment in special programs for the same year, 2004. If a particular group's proportion of the total 8th-grade enrollment is significantly different from the proportion of its special program placements, this may signal a problem.

HINT: You may ask your school for data on special placements, but they are not required by NCLB to collect it or report it publicly. Fortunately this data is available through the U.S. Department of Education's Office for Civil Rights (OCR). In the year 2000, OCR collected data from every public school in the nation and included the data elements we feature in Table 11. You can access this data online at http://205.207.175.84/ocr2000r. We checked this site before going to press and found it somewhat difficult to use, but eventually got the information we wanted. OCR offers an online tutorial for accessing the data that can help you. We suggest you take a few minutes with it before you begin your search.

Table 11: Special Placement

School: Any Town Middle School

Grade/Level: 8

Year: 2004

8th-graders enrolled in:		Gifted and Talented	Special Education	Suspensions	TOTAL
African American	Number	6	24	12	180
	Percent	11%	41%	50%	31%
Latino	Number	10	15	9	175
	Percent	19%	25%	38%	30%
White	Number	37	20	3	235
	Percent	70%	35%	12%	39%
TOTAL	Number	53	59	24	590
	Percent	100%	100%	100%	100%

Example for reading this table: Out of 53 gifted and talented 8th-graders at Any Town Middle School, 6 were African American. This means that African-American students make up 11% of gifted and talented enrollments, while they make up 31% of the entire student body.

ANALYSIS: We can see that Any Town Middle School follows a similar pattern to what we find nationally. White students are more likely to be in programs for gifted students, and African Americans and Latinos are more likely to be in special education or suspended. For example, African-American students make up 31% of the school's total enrollment, but they make up 50% of all suspensions. Suspensions are not necessarily related to academic problems, but research has shown that students who are in low-level classes are more likely to be suspended. The data in our

Step Two

table suggests that this problem may exist at Any Town Middle School as well.

EXAMPLE: Pie charts. Pie charts again provide an effective way to display differences in group representation.

Table 11: Pie Chart: Any Town Middle School, Special Placements by Race/Ethnicity, 2004

Total Enrollment

- White
- Latino
- African American

31% / 30% / 39%

Gifted and Talented

- White
- Latino
- African American

11% / 19% / 70%

Special Education

- White
- Latino
- African American

35% / 25% / 41%

Suspensions

- White
- Latino
- African American

12% / 38% / 50%
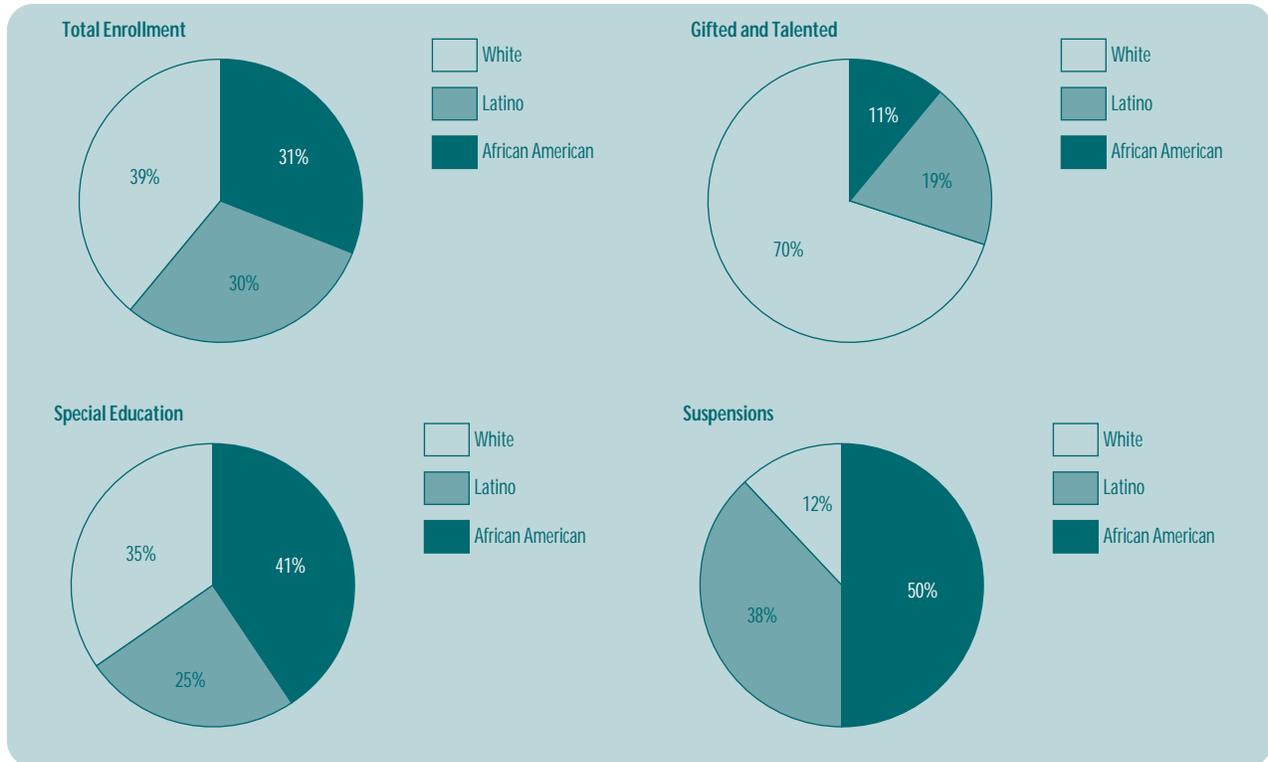
Example for reading this graph: Latino students make up 30% of the school's total enrollment, but only 19% of the gifted and talented enrollment. White students make up 39% of the school's total enrollment but 70% of the gifted and talented enrollment.

A Lesson from North Carolina About the Importance of a Strong Curriculum

Eric Smith was the school superintendent for the Charlotte-Mecklenburg school system. While studying the data about student performance in the district, he discovered that something seemed to be wrong. Smith saw that despite steadily increasing scores on the state's math test, African-American SAT scores were falling. Digging deeper into the data, he found his answer: African-American students were far less likely to be enrolled in high-level math courses in middle school than their White peers, even though they had the test scores to do the work.

Superintendent Smith decided to act. He issued an order to tear up the middle school schedules and reassign 8,000 students to make sure all middle schoolers, White and African-American alike, had access to college-preparatory mathematics. Many teachers, and even some parents, complained. They said it's not fair to the students to give them work that is too hard for them.

In the end, Superintendent Smith was proved correct. Just one year following his decision, the middle school math scores for all student groups rose with African-American students posting the largest gains. In grade 8 alone, the proportion of students overall at the proficient level increased by 5 percentage points with White students gaining by 3 points and African Americans by 10 points. The net effect? The Black-White achievement gap narrowed by 7 percentage points in one year.

Why can't other districts do the same thing?

SOURCES: Johnson, Darragh, "A Classroom Crusade," The Washington Post, November 10, 2002. Data from North Carolina Department of Public Instruction, 2002.

NEXT: Now we will begin to look at what research says is the most important factor in determining whether or not students meet standards: teacher quality.

Teacher Quality

The evidence on teacher quality is clear. Effective teachers can help students make enormous achievement gains. In fact, one respected researcher has concluded that if we could provide five good teachers in a row to our low-income students, we could close the achievement gap on state tests. Unfortunately, the opposite is also true. Ineffective teachers can do lasting damage to their students. And the evidence is clear that low-income and minority students are disproportionately taught by less effective teachers. (see *Thinking K-16*, "The Real Value of Teachers," Winter 2004 and *Thinking K-16*, "Good Teaching Matters," Summer 1998 at www.edtrust.org.)

There is no perfect way to measure teacher quality or teacher effectiveness, but No Child Left Behind does require states and districts to take steps to make sure that all teachers are highly qualified. Effective immediately, all new teachers hired are supposed to meet the minimum standards for qualifications laid out in the law[1] (See "What is NCLB's definition of a 'highly qualified' teacher?") By 2005-06, *all* teachers are supposed to meet these standards. (For more information, see the Education Trust's NCLB Fact Sheet #8, "Teacher Quality" at www.edtrust.org.)

Under NCLB, parents have a right to know the qualifications of the teachers in their schools. Districts must publicly report on the percentage of classes taught by teachers who are not highly qualified in the district as a whole and in each individual school. Districts must also report on the percentage of teachers with emergency or provisional licenses at the school and district levels, and on the professional qualifications of teachers at the school and district levels. These qualifications will vary by state, but might include factors such as the degree earned in college or the kind of license held.

NCLB also requires that states, districts, and

What is NCLB's definition of a "highly qualified" teacher?

- All teachers must meet all state certification requirements and get a license;
- All teachers must hold at least a college degree;
- All teachers must demonstrate that they are competent in the subject areas they teach. This can be done either through taking a "rigorous" state test, by holding a college degree in the subject, or by passing a competency test.

schools take concrete steps to make sure that low-income and minority students get their fair share of good teachers. Each state must develop and implement a plan to ensure that poor and minority children are not taught at higher rates than other children by teachers who are inexperienced, uncertified, or are not knowledgeable about the subject they're teaching.[2] Districts must publicly report on the percent of classes taught by teachers who are not highly qualified, both in the schools educating the most low-income students and in the schools educating the fewest low-income students. If fewer classes in high-poverty schools are being taught by highly qualified teachers, the district must correct this imbalance by doing such things as recruiting qualified teachers to low-income schools and offering teachers training to become highly qualified.[3] At the school level, principals must certify in writing every year whether the school is meeting state goals for increasing teacher quality.[4]

As we said earlier, there is no perfect way to measure teacher quality. You cannot judge teacher quality based on credentials or experience alone. But if you see that the low-income or minority students in your school or district are disproportionately taught by teachers with fewer qualifications or less experience, this should be a signal to you that these students are not getting equal access to one of the most important factors contributing to high achievement.

The following two tables are ways to look at the distribution of teachers who meet the highly qualified definition under NCLB.

Footnotes
[1] The requirement applies to all schools receiving federal Title I funds for improving the academic achievement of low-income students.
[2] This requirement is in Section 1111(b)(8)(C) of the No Child Left Behind Act.
[3] This requirement is in Section 1112(c)(1)(L) of the No Child Left Behind Act.
[4] This requirement is in Section 1119(i) of the No Child Left Behind Act.

Step Two

Step Two

Table 12: Distribution of Highly Qualified Teachers

School: Any Town Middle School

Year: 2004

	Percent in the school	Percent in the district	Percent in the state
Classes taught by teachers who are NOT highly qualified	18%	11%	8%

Example for reading this table: At Any Town Middle School, 18% of classes are taught by teachers who are NOT highly qualified under NCLB, compared to 11% at the district level and 8% at the state level.

ANALYSIS: Both Any Town Middle School and Any District have less than their fair share of highly qualified teachers.

EXAMPLE: Bar graph. To simplify this message, we will use bar graphs to compare the percentages of classes taught by teachers who are not highly qualified in Any Town Middle School, Any District, and Any State. This will draw the audience's attention to the inequitable distribution of highly qualified teachers. Remember that higher numbers mean fewer highly qualified teachers.

Table 12: Bar Graph: Percent of Classes Taught by Teachers Who Are NOT Highly Qualified, 2004

Example for reading this graph: 18% of classes at Any Town Middle School are taught by teachers who are NOT highly qualified under NCLB.

NEXT: We will look at the distribution of highly qualified teachers among different schools in Any District to see whether highly qualified teachers are distributed equitably between high-poverty and low-poverty schools.

## Table 13: Distribution of Highly Qualified Teachers in Any District

District: Any District

Year: 2004

	Percent in the district overall	Percent in highest-poverty schools	Percent in lowest-poverty schools
Classes taught by teachers who are NOT highly qualified	11%	17%	7%

Example for reading this table: In Any District, 11% of classes are taught by teachers who are NOT highly qualified under NCLB. In the highest-poverty schools in Any District, 17% of classes are taught by teachers who are not highly qualified, compared to 7% in the lowest-poverty schools.

ANALYSIS: Students who attend Any District's highest-poverty schools are much more likely to be in classes taught by teachers who are not highly qualified than their peers in the lowest-poverty schools.

EXAMPLE: Bar graph. We will use another bar graph to compare the percentage of classes being taught by teachers who are not highly qualified in Any District as a whole, and in Any District's lowest- and highest-poverty schools.

Table 13: Bar Graph: Percent of Classes Taught by Teachers Who Are NOT Highly Qualified by Poverty Level of School, 2004
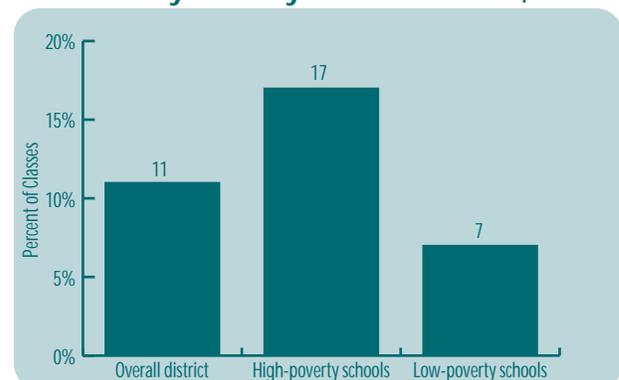
Example for reading this graph: 17% of classes in Any District's poorest schools are taught by teachers who are NOT highly qualified, compared to 7% of classes in the District's richest schools.

NEXT: We will look at the state and local education dollars available to Any District compared to other districts in the state.

Are there funding gaps between districts?

In order to attract and retain qualified teachers, develop challenging curricula and engage in all of the other activities that contribute to student success, districts need adequate financial resources. The vast majority of public education dollars come from states and localities. In many states, the districts educating the most low-income and minority students have fewer state and local education dollars than the districts educating more White and affluent students. This inequity bars many high-poverty and high-minority districts from providing their students with the services that students in more affluent districts regularly receive, much less the additional services needed to assist struggling students. (For more information, see "The Funding Gap" report on our Web site at www.edtrust.org.)

To determine whether Any District is receiving an equitable share of state and local education dollars, we will look at the funds it has available per pupil in comparison to the per-pupil funds of neighboring districts. We do this because per-pupil funding often varies widely within a metropolitan area. This difference is due in part to the fact that some states rely heavily on local property taxes to fund schools, and property tax bases between cities and their neighboring suburbs often differ greatly.

HINT: While some states do collect and publicly report on school district finances, they are not required to do so. Fortunately, the U.S. Department of Education's Education Finance Statistics Center has data on per-pupil funds in every school district for the 2000-01 school year. This online data tool is available at http://www.nces.ed.gov/edfin/search/search_intro.asp. The Education Finance Statistics Center will allow you to conduct a search of the funds available in your district and all other districts within a set geographical distance, just as we have done in Table 14. You can also ask for a search by districts similar to yours. A brief tutorial is available for new users to help you make the most of this tool.

Table 14: Per Pupil Funds in Any District and Neighboring Districts
District: Any District
Year: 2001

District Name	Per Pupil Funds
Any District	$6,745
District A	$8,602
District B	$7,004
District C	$7,478
District D	$6,998

Example for reading this table: Any District has $6,745 in state and local funds available per pupil, compared to neighboring District A, which has $8,602 in state and local per-pupil funds.

ANALYSIS: Compared to its neighboring districts, Any District has significantly fewer state and local education dollars per pupil. Compared to District A, Any District has $1,857 fewer per pupil. That works out to a difference of $46,425 for a typical classroom of 25 students, and $742,800 fewer for a typical

Step Two

Step Two
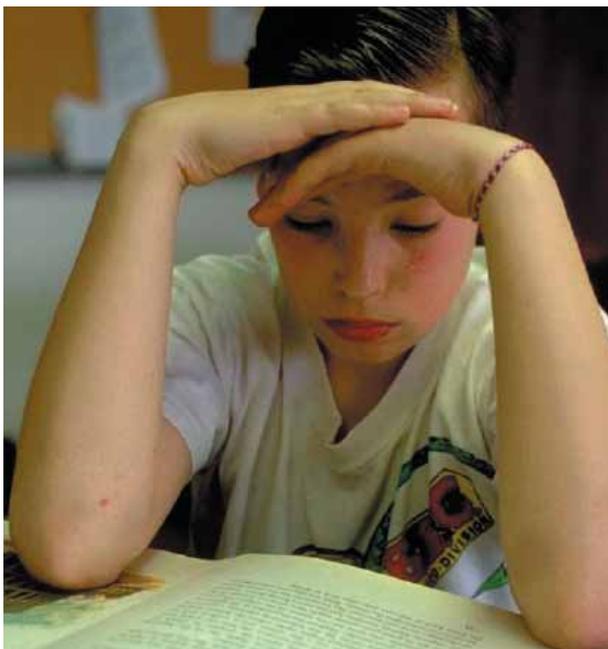
school of 400 students. Because of this funding disparity, Any District will have difficulty providing its students with the same level and quality of resources and services as students in its neighboring districts receive.

EXAMPLE: Bar graph. A simple bar graph will clearly show the funding differences between Any District and surrounding districts.
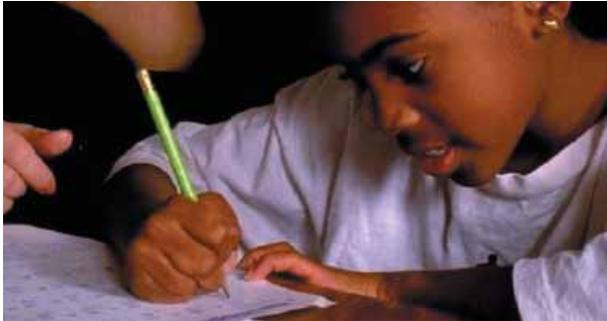
Table 14: Bar Graph: Any District Per Pupil Funds Compared to Neighboring Districts, 2001
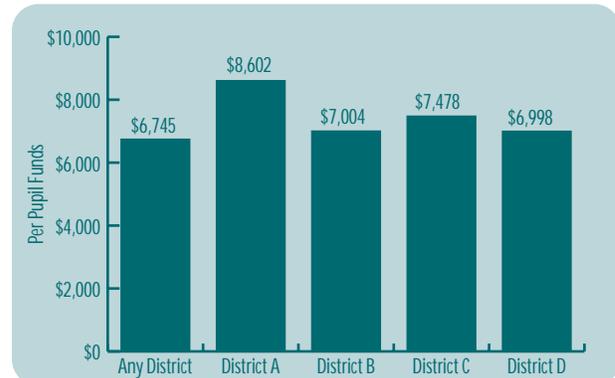
Example for reading this graph: Any District has $6,745 in state and local funds per pupil compared to District A, which has $8,602 in state and local funds per pupil.

NEXT: We will take a look at the things we've learned to create a data message for ATMS.

What's the reality at Any Town Middle School?

Here is a list of some of the things we have learned through our data analysis of Any Town Middle School, Any Town High School, and Any District.

HINT: Keep in mind that this is only a very partial list of what you can learn through collecting and analyzing data. Be open to possibilities! They're endless.

Our analysis of Any Town achievement data shows:

- ATMS is succeeding with some students but falling drastically short with others.
- Overall achievement at ATMS has improved over the past three years.
- There are large achievement gaps within ATMS. African-American and Latino students are less likely to be proficient or above than their White classmates, and the scores of low-income, LEP, and special education students lag behind the school's overall scores.
- The achievement of all racial/ethnic groups at ATMS has improved over the last three years, but the achievement gap between groups is wider.
- At Any Town High School, large numbers of students are not graduating on time, if at all.

We also have important information about opportunities to learn at ATMS.

- White students at ATMS are much more likely than Latino or African-American students to be in a higher level math class, and are also much more likely to be in the school's gifted and talented program. Latino and African-American students are much more likely to be placed in special education or to be suspended.
- Students at ATMS get less than their fair share of highly qualified teachers when compared to other students in the district and the state.
- Students in Any District's poorest schools are less likely to get highly qualified teachers than students in the district's richest schools.
- Any District has fewer state and local education dollars than its neighboring districts.

The picture that emerges from this data may be hard to look at. It certainly doesn't seem fair. But thankfully we can also use data to point us in the right direction. One thing we can do is find schools and districts that tell us what's possible when educators, parents, and community members work together for the good of all students. There are plenty of examples nationwide of schools and districts that are doing what it takes to get all students to high levels of achievement. This takes us to the third part of this Guide.

How Any Town Parents Used Data to Create a School Improvement Plan

Step Three

The parent group from Any Town Middle School (ATMS) was beginning to get an idea for why their school was classified as "needing improvement." The Save the Any Town Schools (SATS) group had been helpful. Some of the data was difficult to get, and early on the parents experienced some stonewalling at the school. But over time, the process of collecting and analyzing the data created more opportunities for dialogue with the principal and teachers, and several became actively involved, working alongside the parents.

The data had uncovered achievement gaps between groups of students at Any Town Middle School. Importantly, the data also revealed gaps in opportunities to learn among groups of students that teachers and administrators were not aware of. While there was still some resistance and defensiveness about the data, both among some community members and some school staff, more of the talk turned to what to do about what they had learned.

The SATS advisers suggested it was time for the parents to complete Step Three of the Community Data Guide. The SATS group trained the parents to conduct a search for high-performing middle schools with

students like those at ATMS. They found one in a nearby town where it was easy to visit, and several others that they interviewed by phone. The parents used a short questionnaire developed by SATS for interviewing the principals of these high-performing schools. They asked about the curriculum and the qualifications of the teachers. They collected sample lessons in math and language arts. They learned about the extra help the schools gave struggling students and the ongoing professional development opportunities for teachers.

Finding schools that were succeeding with students like theirs was an inspiration to the parents and bolstered their confidence. They presented these lessons at the school improvement planning meetings with the teachers and the administrators, using their examples to develop their plans to improve student achievement at ATMS, secure in the knowledge that it could be done. The teachers and the principal decided to see the schools for themselves and were similarly impressed. Any Town Middle School had begun its journey toward improving student achievement for every student.

Step Three

Step Three

STEP THREE: Success

Where are schools succeeding with ALL students?

It is important to look at success stories to show that all students can meet high standards when given adequate opportunities to learn, and to learn from these schools' example. These successes dispel the myth that poor children and children of color cannot learn at high levels. They also provide lessons for other schools and districts to follow.

Let's go back to Any District, but this time, we'll focus our attention on another school in that district- Our Town Middle School (OTMS). OTMS is in the same community as Any Town Middle School, and it serves the same kinds of students. But OTMS has been more successful in closing gaps between groups and bringing all students to high levels of achievement.

Our Town Middle School Enrollment by Race/Ethnicity, 2004

- 35% (White)
- 38% (Latino)
- 27% (African American)

Legend:
- African American
- Latino
- White
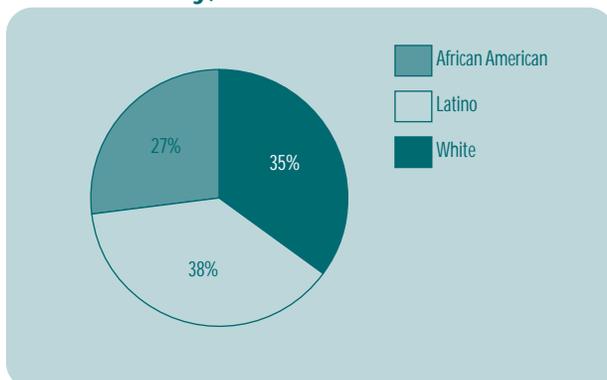
Like ATMS, OTMS is a racially and ethnically diverse school, with no group making up more than 50% of the 8th-grade enrollment.

Our Town Middle School 8th-Grade Achievement in Mathematics by Race/Ethnicity, 2004

Percent of Students

	African American	Latino	White	Overall
Proficient/Advanced	89%	86%	87%	87%
Basic	11%	14%	13%	13%

Legend:
- Proficient/Advanced
- Basic
- Below Basic
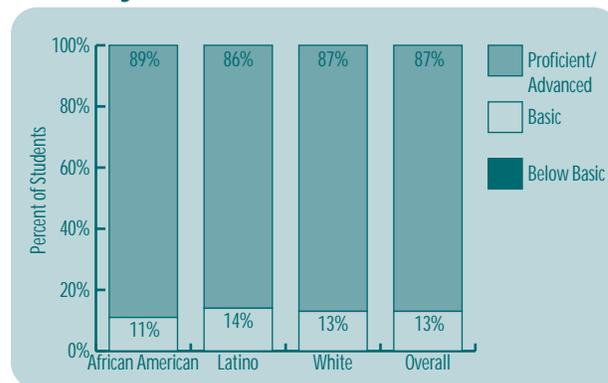
All groups of students at OTMS are achieving at high levels. There are no achievement gaps between different groups of students, and no students are in the below basic achievement level.

How has OTMS achieved this success with all students? Let's look at the opportunities OTMS students are given to learn.
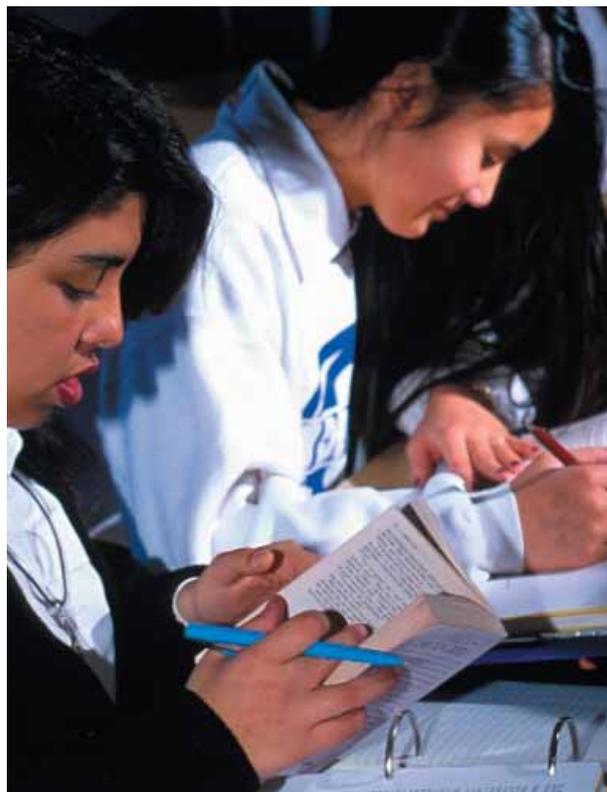
Our Town Middle School 8th-Grade Mathematics Course-taking by Race/Ethnicity, 2004

Geometry

- White
- Latino
- African American

33% / 37% / 30%

Algebra I

- White
- Latino
- African American

24% / 39% / 37%

Pre-Algebra

- White
- Latino
- African American

36% / 32% / 32%

General Math

- White
- Latino
- African American

33% / 40% / 27%

Total

- White
- Latino
- African American

35% / 38% / 27%
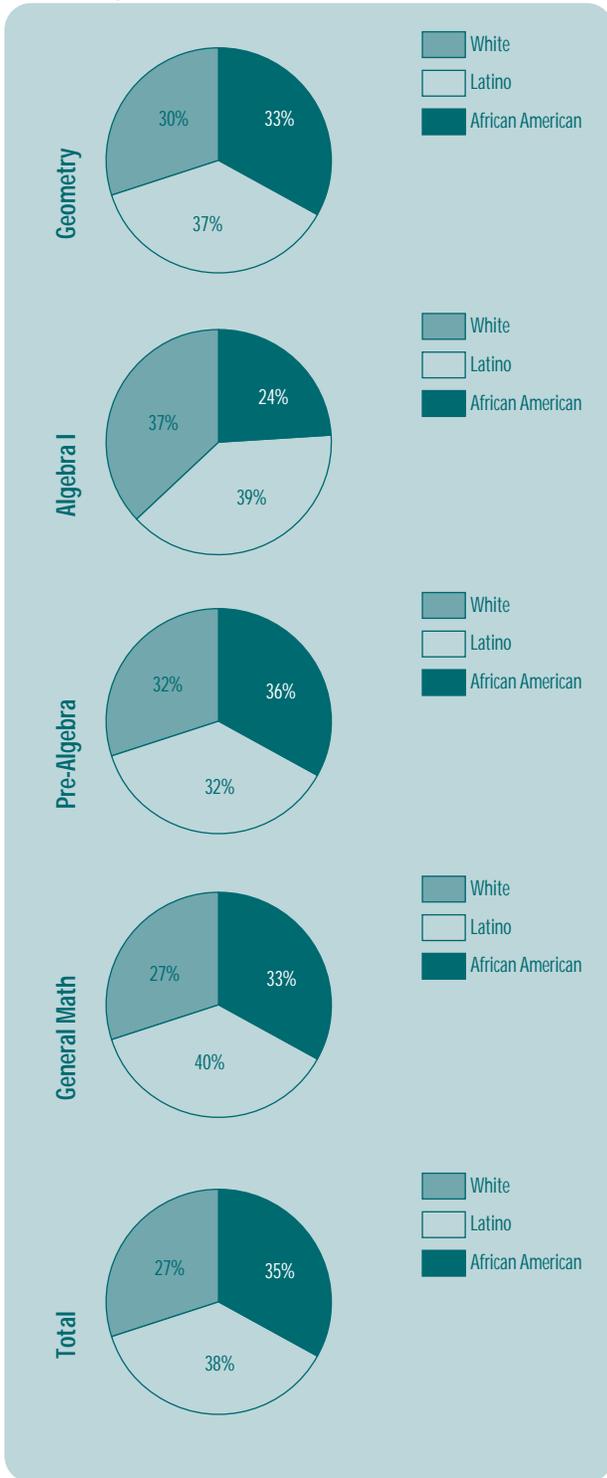
At OTMS, the majority of 8th-graders are enrolled in the challenging math courses that will prepare them for high-level high school math. And the racial/ethnic breakdown of the students enrolled in each course is close to the racial/ethnic breakdown of the 8th-grade class as a whole. No group is significantly over- or under-represented in a particular course.

Percent of Classes Taught by Teachers Who Are NOT Highly Qualified, 2004

Percent of Classes

Our Town Middle	Any District	Any State
6	11	8
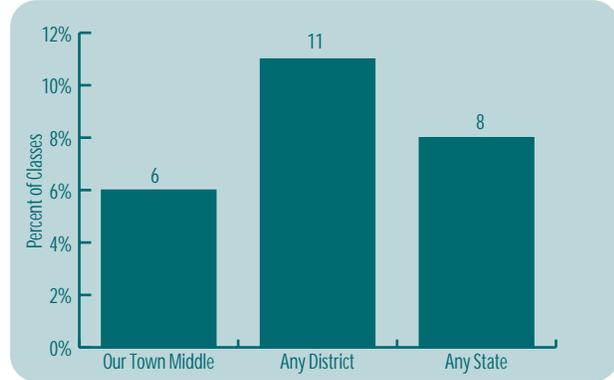
We also see that OTMS has a smaller percentage of classes taught by teachers who are not highly qualified than the district or the state.

From looking at the enrollment, achievement and opportunity data from Our Town Middle School, we see that with the right mix of curriculum and teacher quality, coupled with extra time and support for students who need it, it is possible for a school with demographics very similar to those at Any Town Middle School to produce high levels of achievement.

Step Three

Step Three

OTMS may be an imaginary school, but it is like many schools across the country. To find real-life examples of high-performing schools in your community, investigate the Education Trust's interactive database, Dispelling the Myth, at www.edtrust.org. Here are the kinds of schools you'll find there:

Frankford Elementary School

Frankford Elementary School in Frankford, Delaware, is 29% African American, 34% Latino and 76% low-income. At Frankford, 100% of low-income fifth-graders met state standards in reading, and in fifth-grade math, the school has closed the gap between African-American and White achievement.

York Chester Middle School

York Chester Middle School in Gastonia, North Carolina is 51% African American, 39% White, and 74% low-income. York Chester has been successful in narrowing the achievement gap between African-American students and White students, as well as between low-income students and the student body as a whole.

Elmont Memorial Junior-Senior High School

Elmont Memorial Junior-Senior High School in Elmont, New York, is 75% African American, 12% Latino and 24% low-income. Almost 100% of Elmont's students met the state's "Regents" standards for graduation in English and math.

Frankford Elementary Frankford, Delaware

• **29% African American**
• **34% White**
• **34% Latino**
• **76% Low-Income**

NOTE: Scores not reported for Latino students because there were too few in the school.

Source: Delaware Department of Education Online School Profiles, http://issm.doe.state.de.us/profiles/EntitySearch.APSX

High Achievement at Frankford 2004 Grade 5 Reading

Percent Meeting Standards	All	African American	White	Poor
	98	100	94	100

High Achievement at Frankford 2004 Grade 5 Math

Percent Meeting Standards	All	African American	White	Poor
	81	83	83	75

York Chester Middle School Gastonia, North Carolina

• **51% African American**
• **39% White**
• **74% Low-Income**

Source: North Carolina Department of Public Instruction, http://www.ncpublicschools.org

Closing Gaps at York Chester 2004 Reading Composite

Percent Proficient	All	African American	White	Poor
	76	74	81	72

Closing Gaps at York Chester 2004 Math Composite

Percent Proficient	All	African American	White	Poor
	80	77	83	76

Elmont Memorial Junior-Senior High School Elmont, New York

• **75% African American**
• **12% Latino**
• **24% Low-Income**

Source: New York State School Report Card, http://www.emsc.nysed.gov/irts/reportcard/

High Achievement at Elmont Class of 2004 Regents English Exam

Percent Meeting Grad. Requirements	All	African American	Latino	Poor	Non-Poor
	99	99	100	100	99

High Achievement at Elmont Class of 2004 Regents Math Exam

Percent Meeting Grad. Requirements	All	African American	Latino	Poor	Non-Poor
	96	95	94	94	96
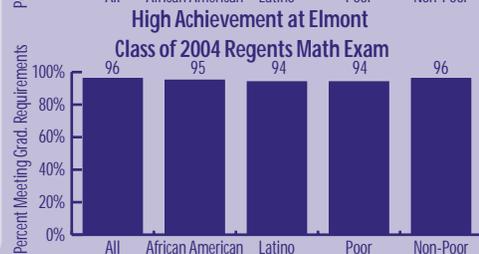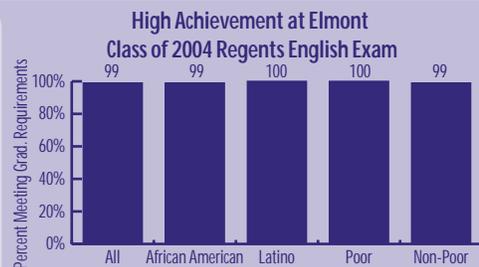
Dayton's Bluff Achievement Plus Elementary School

Dayton's Bluff Achievement Plus Elementary School in St. Paul, Minnesota is 48% African American, 21% Asian, 14% Latino, and almost all of the students are low-income. Dayton's Bluff has been successful in dramatically improving scores for every student in math and reading. In third grade, almost eight in ten students met standards in both reading and math.

Dayton's Bluff Achievement Plus Elementary St. Paul, Minnesota

- 48% African American
- 21% Asian
- 14% Latino
- 15% White
- 92% Low-Income

Source: Minnesota Department of Education School Report Card, http://education.state.mn.us/ReportCard 2005

Improvement at Dayton's Bluff 2001-2004, All Students

Grade 3 Reading: 17, 20, 41, 76
Grade 3 Math: 21, 25, 56, 76

Legend: 2004, 2003, 2002, 2001
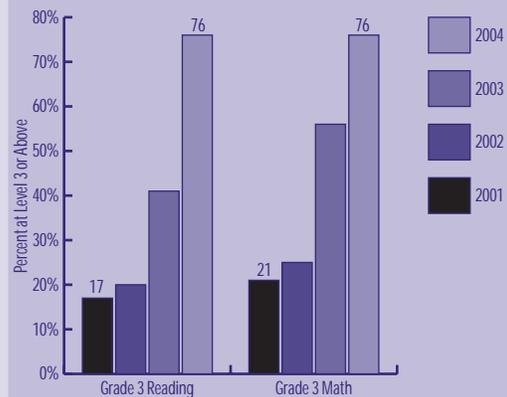
What can we do?

Now that we've collected and analyzed the data, it's time to act. In the case of Any Town Middle School, the data has told us that the school has achievement gaps, that is, some groups of students aren't achieving to the same levels as others. The data has also told us that in order to close these gaps, we need to target school improvement efforts on what opportunities to learn underachieving students are being given.

At Any Town Middle, this will mean working specifically to make sure all students have access to challenging curriculum and highly qualified teachers. It will also mean finding ways to support disengaged students so they stay in school and graduate on time with their classmates. Remember that there was good news in the data for ATMS, too. Although there is still progress to be made, all groups of students were showing some gains over the last three years.

The data offers a good place to begin a community conversation about school improvement. It shows where the school is doing well, at the same time shining the light on where it needs to improve. This will be the first time many community members have seen the data presented in this way. It's important to make sure everyone understands that this is not about assigning blame, it's about working together to make schools better.

With the help of the community organization, the ATMS parents, teachers, and administrators were able to identify nearby schools that served students very much like their own and that were successfully teaching all groups to high levels. These schools provide examples that can be used to change attitudes and show that it's possible to close the achievement gaps. They also offer lessons for how to do it.

Developing a school improvement plan

Haphazard actions are not going to produce the long-term results you want. Because of its persisting achievement gaps, our fictional Any Town Middle School was required by federal law to develop a school improvement plan. Parents were also required to be part of the process. But even if your school is not in this same situation, it's still a good idea to engage your school community in long-term planning

Step Three

to help make the program stronger and make sure your young people have the best academic preparation possible.

This can be a daunting task for many communities. After all, a school system has many moving parts and dimensions. Where do you begin?

Fortunately, there are places to go for guidance on drafting a school improvement plan. The National Center for Educational Accountability (NCEA) provides user-friendly, web-based tools for looking at districts and schools, including an interactive self-audit. Mid-continent Research for Education and Learning (McREL) also provides online help with its school change toolkit, as well as offering direct help to schools. Both NCEA and McREL offer comprehensive frameworks for addressing the components of school improvement, including curriculum, staffing and leadership capacity, instructional practices, data and assessment, resources, among others. Check out NCEA's best practices framework at www.just4kids.org/bestpractice/index.cfm and look for McREL's "Asking the Right Questions: A School Change Toolkit" at www.mcrel.org/toolkit. And of course, you can always call us at the Education Trust for help too.

You might also learn from other community organizations that have been particularly active in local school improvement efforts. The Boston Plan for Excellence in the Public Schools was an instrumental part of drafting the Boston Public Schools for Whole-School Change, a copy of which can be found at the Boston Plan's Web site, www.bpe.org. Two

local education funds have been particularly active in looking at teacher quality and distribution: the Public Education Fund, Chattanooga at www.pefchattanooga.org and the Philadelphia Education Fund at www.philaedfund.org. These are just a few of many wonderful local organizations that are helping to improve their schools.

Schools have it in their power to educate all children to high standards and it is their responsibility to do so. Thousands of schools in the U.S. demonstrate that this is possible. It takes hard work, focus and dedication, but schools that have persistent achievement gaps can and must change their way of doing business.

Armed with data, parent and community groups can work to:

- Change attitudes about why some students are not meeting standards.
- Change policies to make sure that all school systems are 100% focused on getting 100% of their students to high standards.
- Change practices within schools to make sure that all students are given a fair opportunity to learn.

Most institutions are reluctant to change on their own. But public schools are your schools. Parents, community leaders, and you have the power to change them.

Data Resource List

State Education Departments:

Alabama: http://www.alsde.edu
Alaska: http://www.educ.state.ak.us
Arizona: http://www.ade.state.az.us
Arkansas: http://arkedu.state.ar.us
California: http://www.cde.ca.gov
Colorado: http://www.cde.state.co.us
Connecticut: http://www.state.ct.us/sde/
Delaware: http://www.doe.state.de.us
District of Columbia: http://www.k12.dc.us
Florida: http://www.fldoe.org
Georgia: http://www.doe.k12.ga.us
Idaho: http://www.sde.state.id.us
Illinois: http://www.isbe.state.il.us
Indiana: http://www.doe.state.in.us/
Iowa: http://www.state.ia.us/educate/
Hawaii: http://doe.k12.hi.us
Kansas: http://www.ksbe.state.ks.us
Kentucky: http://www.education.ky.gov
Louisiana: http://www.doe.state.la.us
Maine: http://www.state.me.us
Maryland: http://www.marylandpublicschools.org
Massachusetts: http://www.doe.mass.edu
Michigan: http://www.michigan.gov/mde
Minnesota: http://education.state.mn.us
Mississippi: http://www.mde.k12.ms.us
Missouri: http://www.dese.state.mo.us
Montana: http://www.opi.state.mt.us
Nebraska: http://www.nde.state.ne.us
Nevada: http://www.doe.nv.gov/
New Jersey: http://www.state.nj.us/education/
New Hampshire: http://www.ed.state.nh.us
New Mexico: http://www.ped.state.nm.us/
New York: http://www.nysed.gov
North Dakota: http://www.dpi.state.nd.us
North Carolina: http://www.dpi.state.nc.us
Ohio: http://www.ode.state.oh.us
Oklahoma: http://www.sde.state.ok.us
Oregon: http://www.ode.state.or.us
Pennsylvania: http://www.pde.state.pa.us
Rhode Island: http://www.ridoe.net
South Carolina: http://www.myscschools.com
South Dakota: http://www.state.sd.us
Tennessee: http://www.state.tn.us./education/
Texas: http://www.tea.state.tx.us
Utah: http://www.usoe.k12.ut.us
Vermont: http://www.vermont.gov
Virginia: http://www.pen.k12.va.us
Washington: http://www.k12.wa.us
West Virginia: http://wvde.state.wv.us
Wisconsin: http://www.dpi.state.wi.us
Wyoming: http://www.k12.wy.us

Federal Data Resources:

The **National Center for Education Statistics** (NCES) is the U.S. Department of Education's primary source of data collection, analysis, and reporting, and is available at http://www.nces.ed.gov. Along with data reports and publications, the NCES Web site contains numerous data tools, including:

> The **Common Core of Data**, which allows users to easily create tables with school-, district- and state-level data on such areas as enrollment, special placements, staffing, and high school completion. http://www.nces.ed.gov/ccd/

> The **Education Finance Statistics Center**, which provides information on school district finances and allows users to compare the finances of their district with the finances of similar or nearby districts. http://nces.ed.gov/edfin/

> The **NAEP Data Tool**, which provides information on how students in every state perform on the National Assessment of Educational Progress, which is known as the "Nation's Report Card." http://www.nces.ed.gov/nationsreportcard/

The **U.S. Department of Education's Office for Civil Rights** provides school- and district-level data on special student placements. http://205.207.175.84/ocr2000r

The **U.S. Department of Education's Office of Special Education Programs** provides state-level data on special education enrollments, educational environments, teachers, and exiting. http://www.ideadata.org

The **U.S. Census Bureau** collects, analyzes, and reports on a wide variety of population data. http://www.census.gov

Other Data Resources

The **School Information Partnership** collects and reports all the school-, district- and state-level data that is required to be publicly reported under the No Child Left Behind Act as it becomes available. http://www.schoolresults.org

Just for the Kids allows users to identify how their school's academic achievement compares with other school in their state with similar or more disadvantaged student populations. http://www.just4kids.org

Education Watch Online is an interactive state and national data site that allows users to compare student achievement and opportunity data across states and for the nation. http://www.edtrust.org

Dispelling the Myth Online allows users to mine school-level achievement data in almost every state. This interactive Web site allows users to select demographic and performance criteria to conduct rapid searches for high-achieving or high-improving schools for all subjects and grades where state assessment data is available. http://www.edtrust.org

Blank Worksheets

Table 1: Overall Test Scores (pg. 14)
School:
Subject:
Grade/Level:
Test:
Year:

Achievement Level	Percent of Students

Table 2: Overall Test Scores Over Time (pg. 15)
School:
Subject:
Grade/Level:
Test:
Years:

Achievement Level	Percent of Students		
	Year:	Year:	Year:

Table 3: Test Scores by Race and Ethnic Group (pg. 18)
School:
Subject:
Grade/Level:
Test:
Year:

Achievement Level	Percent of Students			
	Racial/Ethnic Student Group:	Racial/Ethnic Student Group:	Racial/Ethnic Student Group:	Racial/Ethnic Student Group:

Table 4: Test Scores by Income Level (pg. 19)

School:
Subject:
Grade/Level:
Test:
Year:

Achievement Level	Percent of Students	
	Low-income	Overall

Table 5: Test Scores by English Proficiency and Special Education Enrollments (pg. 20)

School:
Subject:
Grade/Level:
Test:
Year:

Achievement Level	Percent of Students		
	LEP	Special Education	Overall

Table 6: Test Scores by Race and Ethnic Group Over Time (pg. 21)

School:
Subject:
Grade/Level: 8
Test:
Year:

Achievement Level	Percent of Students								
	Racial/Ethnic Student Group:			Racial/Ethnic Student Group:			Racial/Ethnic Student Group:		
	Year:	Year:	Year:	Year:	Year:	Year:	Year:	Year:	Year:

Table 7: High School Graduation Rates by Race and Ethnicity (pg. 22)

School:

Year:

Year:	Graduation Rates				
	Racial/Ethnic Student Group:	Racial/Ethnic Student Group:	Racial/Ethnic Student Group:	Racial/Ethnic Student Group:	Racial/Ethnic Student Group:

Table 8: 9th-Grade Enrollment and High School Graduates by Race/Ethnicity (pg. 23)

School:

Years:

	9th-Graders	Graduates	Change (Year: to Year:)
Racial/Ethnic Student Group:			
Racial/Ethnic Student Group:			
Racial/Ethnic Student Group:			
Racial/Ethnic Student Group:			
TOTAL:			

Table 9: Enrollment by Race/Ethnicity and Family Income (pg. 25)

School:

Grade/Level:

Year:

	Number of Students	Percent of Students
Racial/Ethnic Student Group:		
Racial/Ethnic Student Group:		
Racial/Ethnic Student Group:		
TOTAL		
Low-Income*		

Table 10: Math Curriculum for 8th-Graders by Race/Ethnicity (pg. 27)

School:

Grade/Level:

Year:

Students enrolled in:		Course:	Course:	Course:	Course:	Course:	TOTAL
Racial/Ethnic Student Group:	Number						
	Percent						
Racial/Ethnic Student Group:	Number						
	Percent						
Racial/Ethnic Student Group:	Number						
	Percent						
TOTAL	Number						
	Percent						
Low-Income*	Number						
	Percent						

Table 11: Special Placement (pg. 29)

School:

Grade/Level:

Year:

Students enrolled in:	Gifted and Talented	Special Education	Suspensions	TOTAL
Racial/Ethnic Student Group:				
Racial/Ethnic Student Group:				
Racial/Ethnic Student Group:				
TOTAL				

Table 12: Distribution of Highly Qualified Teachers (pg. 32)

School:

Year:

	Percent in the school	Percent in the district	Percent in the state
Classes taught by teachers who are NOT highly qualified			

Table 13: Distribution of Highly Qualified Teachers in Any District (pg. 32)

District:

Year:

	Percent in the district overall	Percent in highest-poverty schools	Percent in lowest-poverty schools
Classes taught by teachers who are NOT highly qualified			

Table 14: Per Pupil Funds in Any District and Neighboring Districts (pg. 33)

District:

Year:

District Name	Per Pupil Funds

© The Education Trust, 2004

About The Education Trust

The Education Trust, Inc. was created to promote high academic achievement for all students, at all levels— pre-kindergarten through college. While we know that all schools and colleges could better serve their students, our work focuses on the schools and colleges most often left behind in plans to improve education: those serving African-American, Latino, Native American and low-income students.

The Education Trust works side-by-side with policymakers, parents, education professionals, community and business leaders—in cities and towns across the country—who are trying to transform their schools and colleges into institutions that genuinely serve all students. We also bring lessons learned in local communities back to Washington to help inform national policy debates.

![The Education Trust logo]

The Education Trust, Inc. was created to promote high academic achievement for all students, at all levels—pre-kindergarten through college. While we know that all schools and colleges could better serve their students, our work focuses on the schools and colleges most often left behind in plans to improve education: those serving Latino, African-American, Native American and low-income students.

The Education Trust works side-by-side with policymakers, parents, education professionals, community and business leaders—in cities and towns across the country—who are trying to transform their schools and colleges into institutions that genuinely serve all students. We also bring lessons learned in local communities back to Washington to help inform national policy debates.

MetLife Foundation

MetLife Foundation, established in 1976 by MetLife, supports programs that increase opportunities for young people to succeed, give students and teachers a voice in improving education, develop partnerships between schools and communities and strengthen relationships among parents, principals, teachers and students.