

# Kansas State School for the Deaf

## School Improvement Profile

### 2007-08



**Mission:**

*Total accessibility to language, communication, and educational excellence in a visual environment.*

# FOREWARD

Kansas schools have worked hard to establish rigorous and challenging learning standards for all students. In the 21<sup>st</sup> century, students will face constant change in our advancing society. Schools will have to maintain high standards that will provide all students with the necessary skills to be lifelong learners and to meet the challenges of the future.

To achieve increased performance for all students in Kansas, schools have restructured to improve individual student learning through an accountability and improvement program linked to accreditation. Under QPA, schools must meet certain quality and performance benchmarks. One of the quality benchmarks is for each school to set up an improvement process which includes collecting performance data, identifying goals for improvement, developing interventions and setting up a process for continual monitoring of performance.

The Kansas School for the Deaf (KSD) has developed its school improvement plan to ensure that students who attend KSD will have the necessary skills to meet the challenges of the future. KSD has dual accreditation through the state of Kansas and Advanced Ed. - NCA and follows the same accreditation process as other schools in our state.

This report on the KSD school improvement plan presents goals, interventions, and assessment data on two targeted areas:

- Literacy (Reading Vocabulary)
- Mathematics (Probability, Statistics, and Graphing)

In addition, demographic data and general information about the program is included.

During the 2007-08 school year, KSD students had increased opportunities to improve their performance on the target goals. Staff development activities focused on instructional strategies, curriculum, and assessments that promoted student learning. KSD will continue to devote additional resources and time to achieve higher student performance.

The principle of continuous improvement is the belief that improvement is a never ending adventure; an endless journey. The school improvement process is the vehicle for traveling the road toward the best education possible for all KSD students.

# TABLE OF CONTENTS

Background Information .....	1
School Improvement Process .....	3
Student Demographic Data.....	6
• Student Population.....	6
• Student Attendance.....	10
• Student Suspension.....	11
• Graduation Rate.....	12
Parent Survey .....	13
<b>READING SECTION</b> .....	16
• Stanford Achievement Test Results .....	17
• Kansas State Assessment Results .....	24
• KELPA Assessment Results .....	30
• Star Vocabulary Assessment Results .....	34
• Fairview Multiple Meanings Assessment Results .....	38
• Measures of Academic Progress (MAP) .....	41
<b>MATHEMATICS SECTION</b> .....	45
• Stanford Achievement Test Results .....	46
• Kansas State Assessment Results .....	52
• KSD Curriculum-Based Assessment Results .....	58
• Measures of Academic Progress (MAP) .....	62



# Background Information

The Kansas School for the Deaf is the oldest state educational institution in the State of Kansas. The School was founded in 1861 by Philip A. Emery, a deaf man who had been a teacher at the Indiana School for the Deaf. The School was originally located in Baldwin City. After four years in Baldwin, the school was moved to its current location in Olathe in 1866.

In the 140 years since it was founded, the Kansas School for the Deaf continues its rich tradition as a large center school for deaf children. The school is recognized nationally for its academic excellence in pre-college preparation and its career and transition program leading to job placement upon graduation. KSD is also noted for its winning athletic teams (National Deaf Champions in football, basketball, and volleyball) and still boasts of beating the University of Kansas in baseball in 1897 and 1900.

The Kansas School for the Deaf (KSD) is fully accredited by Advanced ED-NCA and the Kansas State Board of Education. It offers comprehensive educational programming from preschool through high school including the following services:

- Early Childhood, Elementary and Secondary Outcomes-based Instruction
- Technology tools including internet access, technology labs, networked library resources, and multi-media programming opportunities
- Career/Vocational Options
- Mainstream Options
- Residential accommodations with programming which focuses on development of responsibility and individual living and interpersonal skills
- A full array of Related Services including speech therapy, ASL therapy, occupational therapy, physical therapy, psychology, counseling and health care.
- State-wide outreach department featuring consultation, assessment, and the operation of the Kansas auditory training unit program.

Deaf students must communicate and interact in two different cultures. Consequently, American Sign Language and English are both valued and are an integral part of the total school program. It is a part of the KSD mission to develop in each child a native fluency in one or more languages, and through those languages make accessible the same outcomes accessed by all children in Kansas Public Schools.

American Sign Language (ASL) is recognized as the language that characterizes communication among most of our students. ASL is a first and native visual language. English is taught as a second language. Consequently, during a child's early, formative years an environment rich in first language communication (ASL) is considered essential for building the foundation needed to establish fluency in a second language (English).

All means of acquiring fluency in a second language are implemented as appropriate and indicated on Individualized Education Programs (IEPs). These include reading, writing, speech and language therapy, use of amplification, and ASL instruction. Recognizing the need for exposure to both languages, KSD provides:

- Deaf adult role models
- Innovative ASL/ESL programming
- An environment of acceptance which provides a positive self-image, communication fluency and the confidence needed to develop fluency in a second language.

The school recognizes the need to nurture the whole person, promoting mental, emotional, and physical growth. Leadership development opportunities at KSD include:

- Student government
- Junior National Association of the Deaf
- Alpha Optimist and Junior Optimist Clubs
- Academic and Oratorical contests
- Athletic participation in volleyball, football, basketball, and track
- Classes in art, drama, photography
- Artist in residence program

# School Improvement Process

Nationally, Kansas has been ranked among the top states in education. Acting on their commitment to quality education, in 1989 the state adopted the Quality Performance Accreditation (QPA) system, which has as its major focus the continual improvement of student's academic performance.

As part of the QPA system, schools are required to develop school improvement plans which outline their improvement process. Starting in 2005-06, Kansas schools are accredited on an annual basis, dependent on meeting certain quality and student performance criteria. One of the quality criteria is that each school will have in place a school improvement process and plan.

School improvement plans are based on three questions:

- 1) Where are we now? (baseline data)
- 2) Where do we want to be? (Improvement goals)
- 3) How do we get there? (Interventions – new techniques, programs, materials)

## **The School Improvement Process at KSD is as follows:**

- Two areas have been targeted for improvement
  - Reading Vocabulary
  - Math Probability, Statistics, and Graphing
- Data from different assessments are collected in each targeted area
- Based on the assessment data, improvement goals are developed for each area.
- Interventions (new ways of teaching) will be implemented in an attempt to improve skills.
- Assessment data will be collected annually to see if the interventions are working.
- If data indicates that skills are not improving, new interventions may be implemented.
- After 5 years, the cycle is complete, and new areas and goals may be selected for improvement.

This document contains information related to our current school improvement plan which began in 2004-05. In 2007-08 we completed our fourth year of our current school improvement cycle.

## Reading Target Goal

All students will improve their reading vocabulary in all curricular areas.

### Interventions and Activities

- *All students will use contextual clues to develop word meaning in all classes.*  
Students will use Accelerated Reading Program.  
Students will use Accelerated Vocabulary Program.
- **All students will improve their knowledge of multiple meanings.**  
All teachers will teach bridging techniques.  
Teachers will use the Fairview Dolch Vocabulary program.
- *All students will use the vocabulary development strategies of graphic mapping organizers and word walls.*  
All teachers will use word walls and graphic organizers to develop reading comprehension.
- **All students will receive direct vocabulary instruction.**  
Students will use the Wordly Wise Vocabulary program.
- **All students will use bilingual strategies to improve reading comprehension.**  
Teachers will use the strategies of chaining, sandwiching, language separation, and translation (free and literal).

### Assessments

- SAT Reading Vocabulary
- SAT Reading Comprehension
- Kansas State Reading Assessment
- Fairview Multiple Meanings Assessment

- Star Reading Vocabulary Assessment

### **Mathematics Target Goal**

All students will improve their math reasoning skills to solve problems involving graphing, probability, and statistics in all curricular areas.

### **Interventions and Activities**

- **All teachers will use graphing, statistics, and probability to solve problems across all curricular areas.**  
All teachers will receive training in graphing, probability, and statistics.  
All non-math teachers will conduct a data activity with their class at least once per quarter.  
All dormitory teachers will conduct a data activity at least once per semester.
- **All students will use graphing, statistics, and probability software to solve problems.**  
Students will use software to solve problems across all content areas.
- **Math teachers will present a problem of the week that covers graphing, probability, or statistics to their classes.**

### **Assessments**

- SAT Mathematics Assessment
- Kansas State Math Assessment
- KSD Curriculum Based Assessment

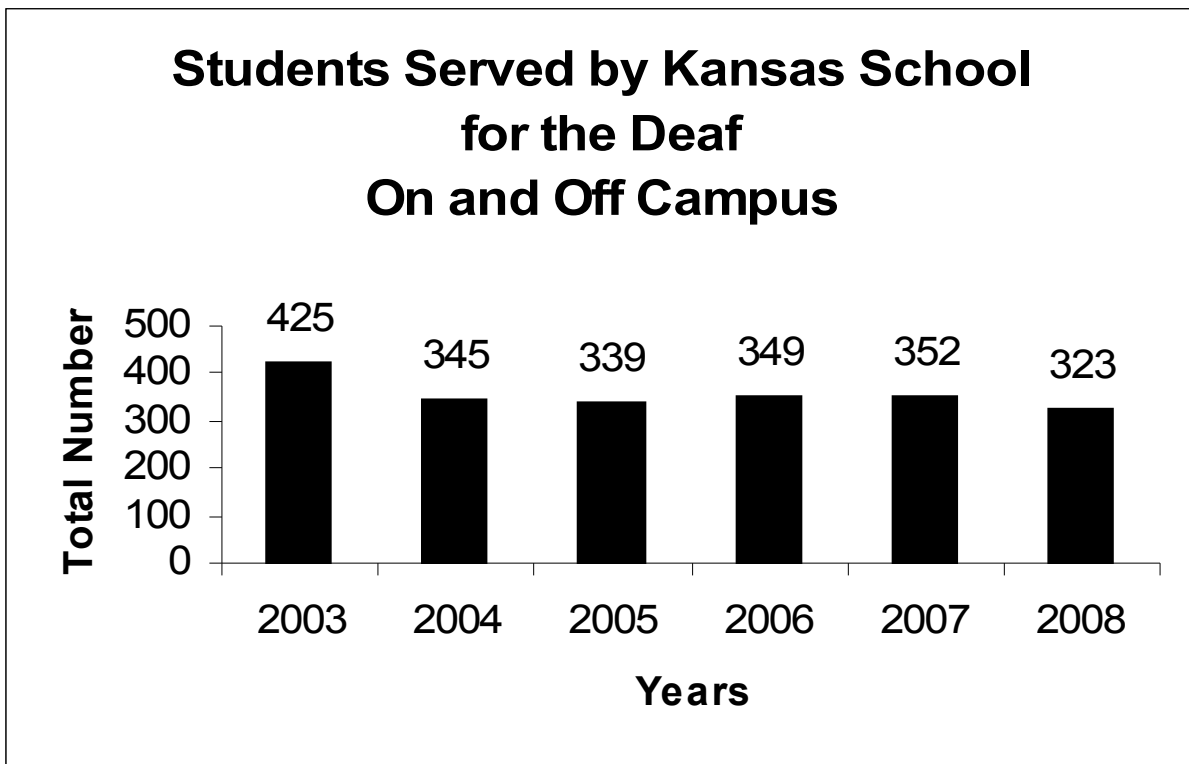
## **STUDENT POPULATION**

On November 15, 1866, the Kansas School for the Deaf had an enrollment of 18 students when it moved into its newly constructed stone building in Olathe. By the year 1893, the enrollment of the school had soared to more than two hundred students. In 1905, the Kansas Legislature enacted a law that made attendance of all deaf persons between the ages of six and twenty-one compulsory unless they attended another special school

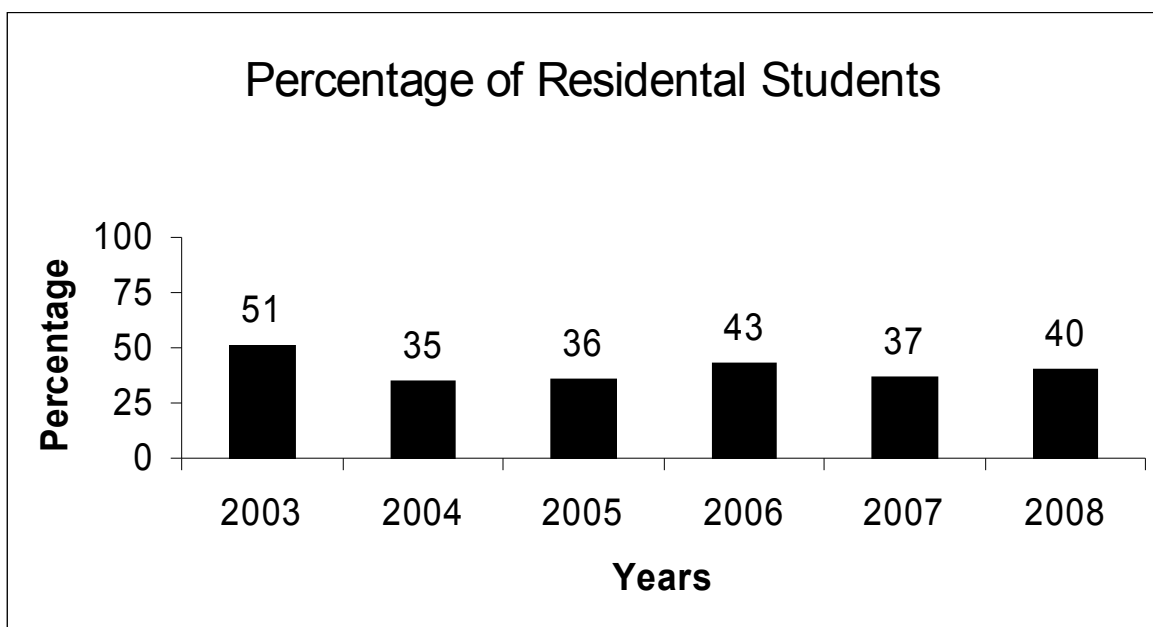
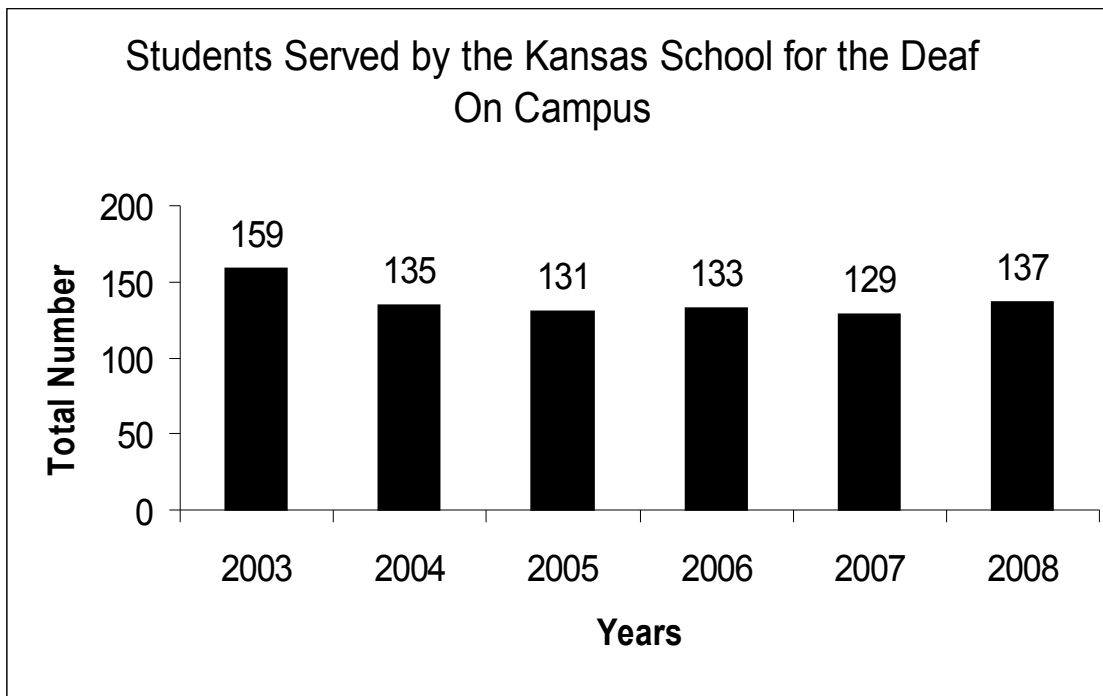
The population of KSD has remained around two hundred students throughout the history of the school. In the 1960's and 1970's the population swelled due to a nationwide rubella epidemic. With the passage of PL 94-142, mandating more local options, the population on campus has slowly declined. During the last decade, KSD has expanded its outreach services to assist deaf and hard-of-hearing children enrolled in programs all across Kansas. KSD's current population includes students served both on campus and in public school programs throughout the state.

The following graphs display the percentage of students served on campus and through outreach programs. The data for students served on campus is also displayed by gender, residency, and ethnicity.

**Student Population  
2003-08**



## Population Trends Over Time

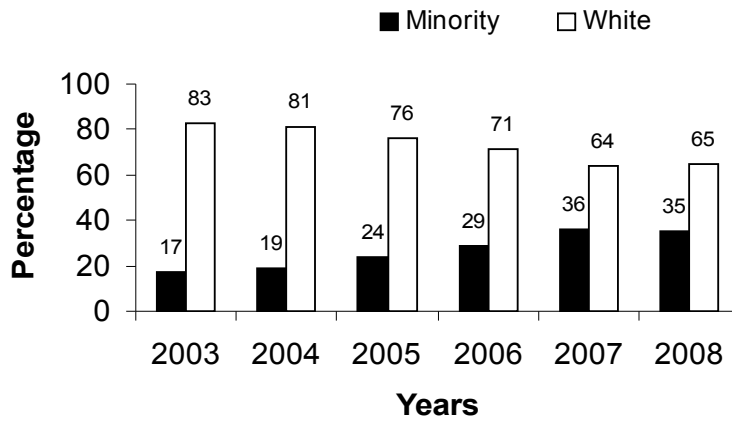


# Population Trends Over Time

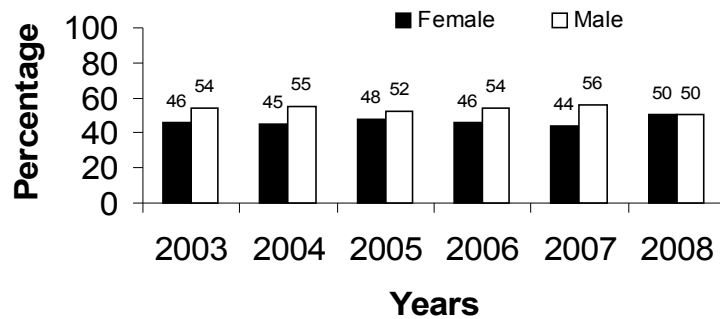
## Disaggregated

The population data was disaggregated for two different variables by *gender* and by *race/ethnicity*. Data is not disaggregated by socio-economic status since KSD cannot identify this group.

### Student Population On Campus Ethnicity

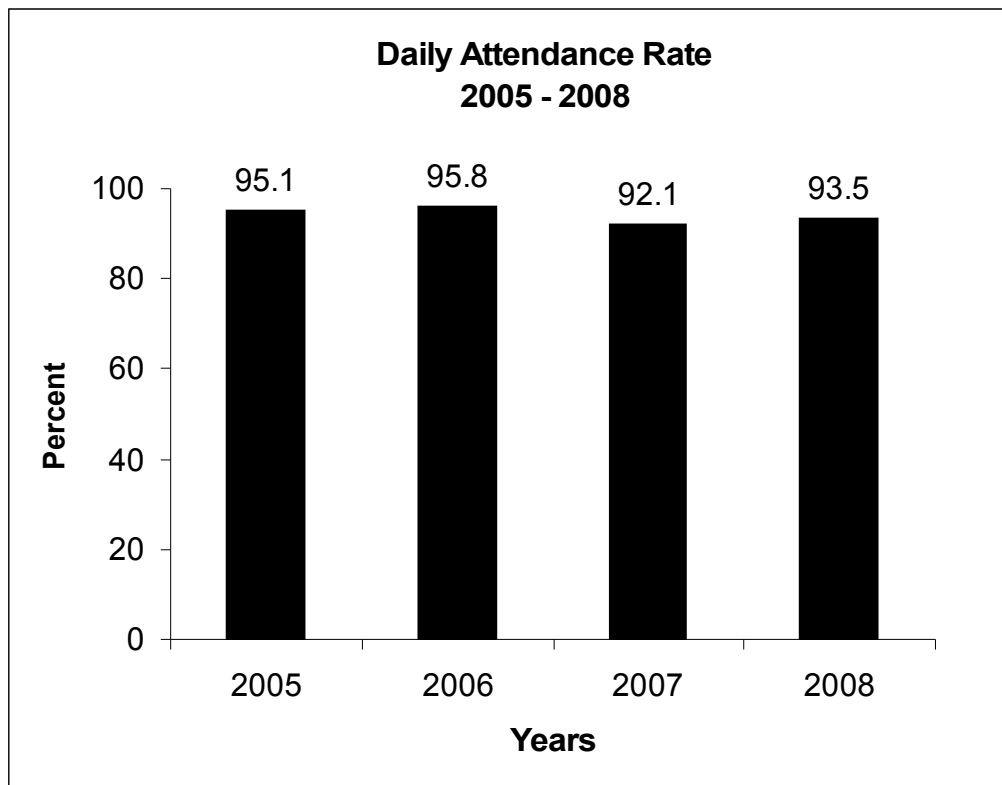


### Student Population On Campus Gender



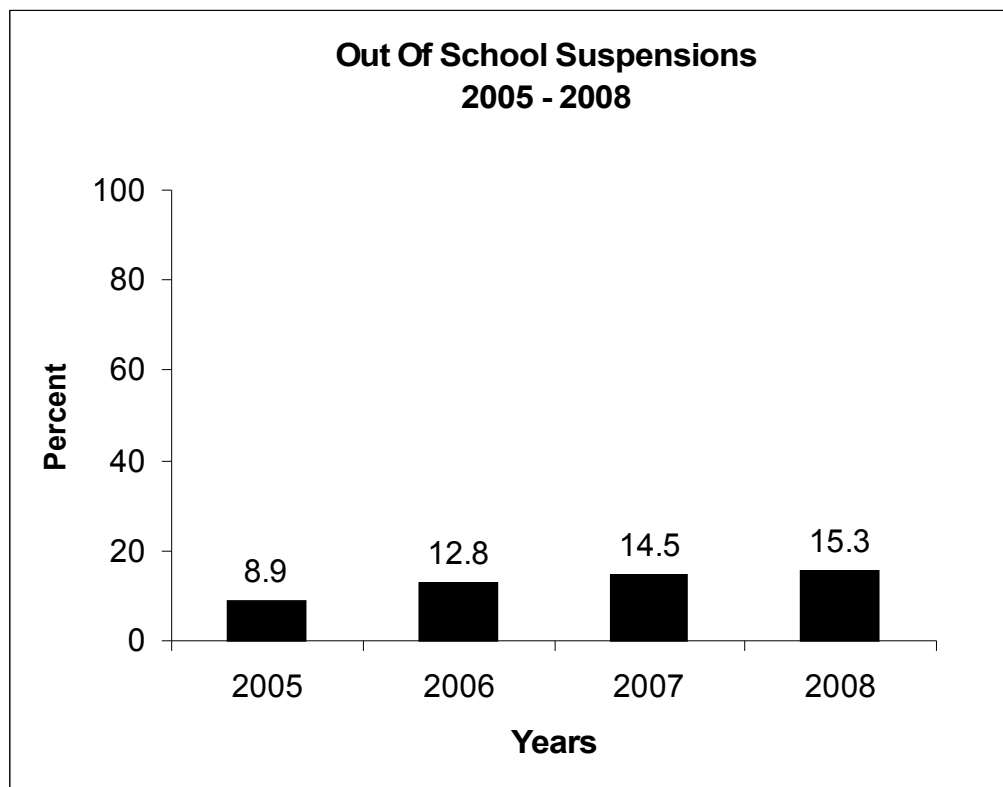
## Student Attendance

Attendance data from the Kansas School for the Deaf is displayed below. As part of the No Child Left Behind Legislation, schools must have a 90% or higher attendance rate in order to make Adequate Yearly Progress (AYP).



## Student Suspensions

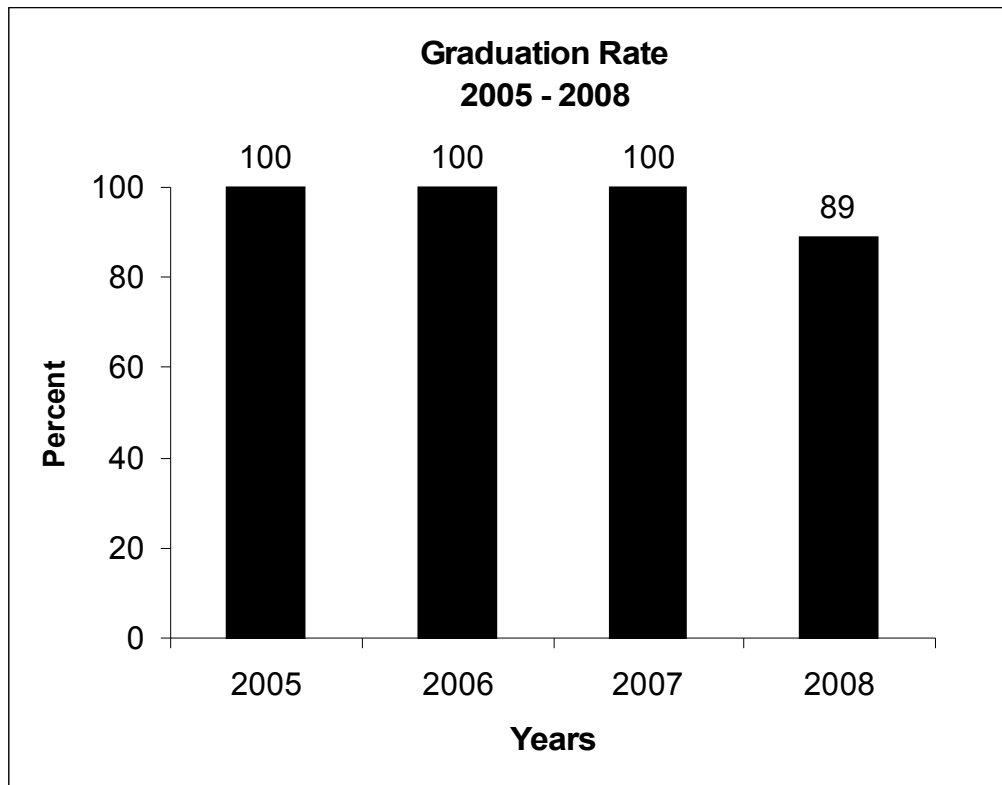
The graph below displays the out of school suspension data. The graph below displays the percentage of students receiving an **out-of-school suspension (OSS)** from 2005 through 2008. Our data includes both school and dormitory suspensions which may be one reason our average suspension rate is higher than the state.



The KSD Suspension rate is higher than the State average. The school is addressing that by implementing the Positive Behavior Support Program which began in 2006-07.

## Graduation Rate

The graph below displays the graduation rates for 2005 - 2008. As part of the No Child Left Behind Legislation, schools must have a 75% or higher graduation rate in order to make Adequate Yearly Progress (AYP).



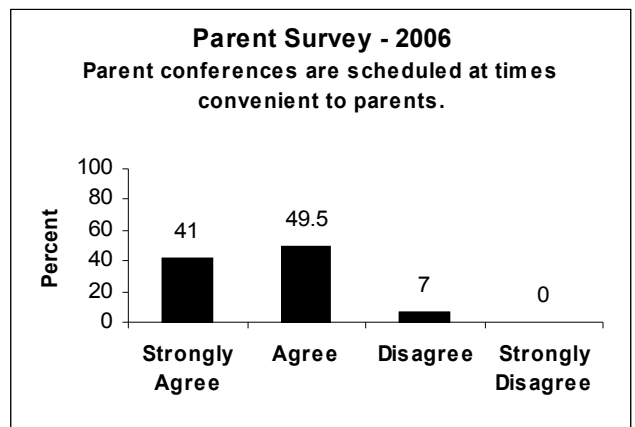
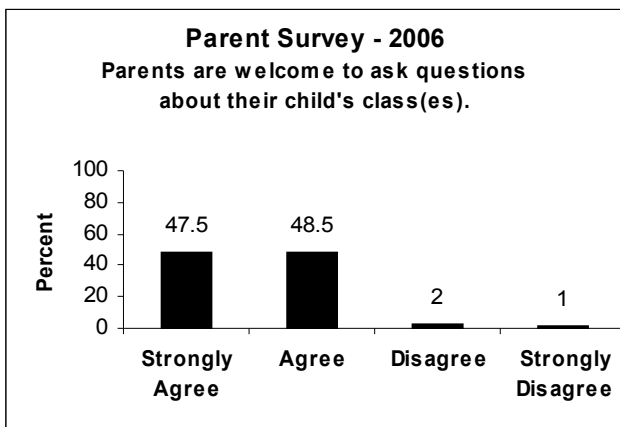
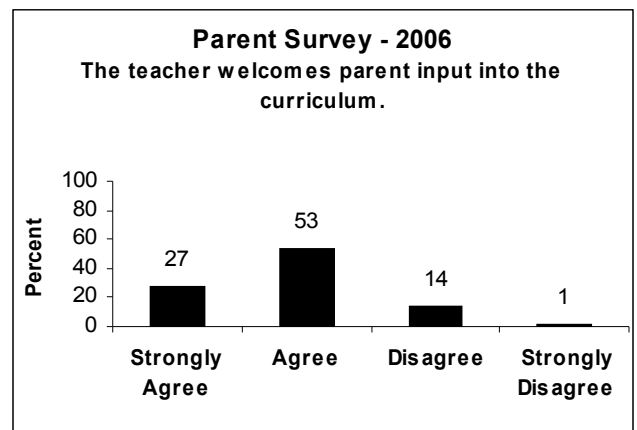
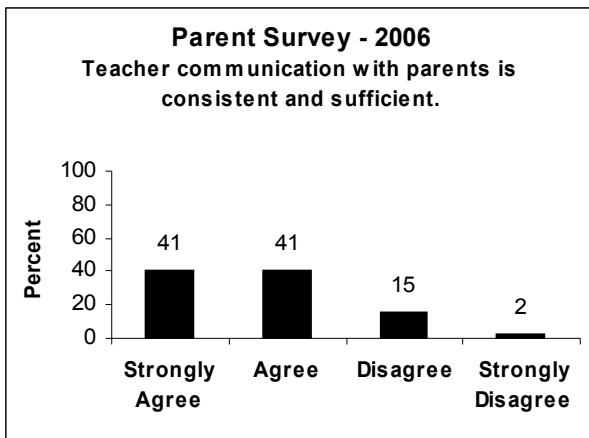
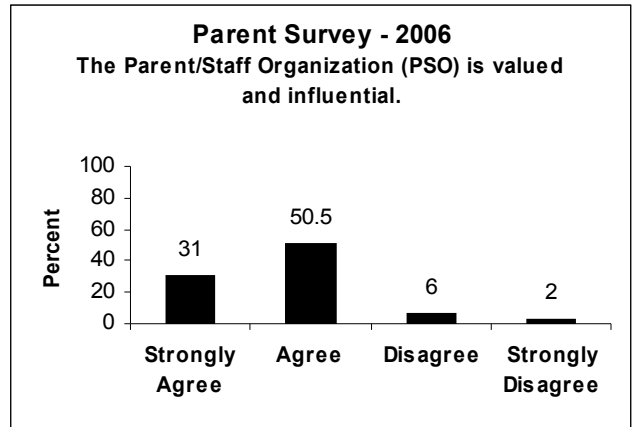
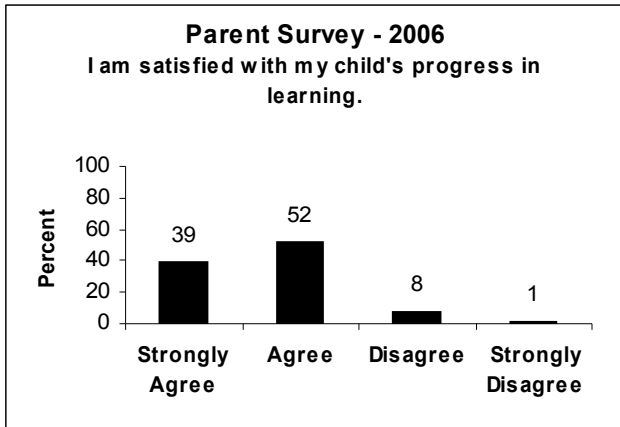
## **Parent Survey**

Parent feedback on school related issues is an ongoing process at KSD. The Parent/Staff Organization (PSO) and the KSD Site Council are organized forums for parents. In addition to these groups, an annual survey was distributed to all parents through 2006. The survey was included in the enrollment packet sent out to all families in the summer. Parents were encouraged to complete the survey and turn them in at the August enrollment. The following graphs represent the parent responses collected in August 2006. There was no data collected during the summer of 2007. A new parent feedback process will be implemented during the 2008-09 school year.

# Parent Survey

## 2006 Results

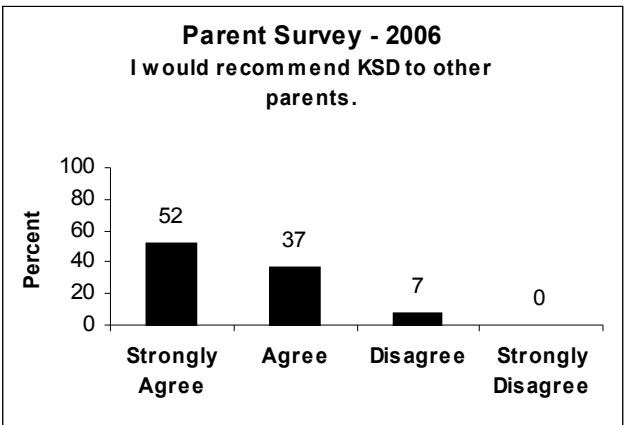
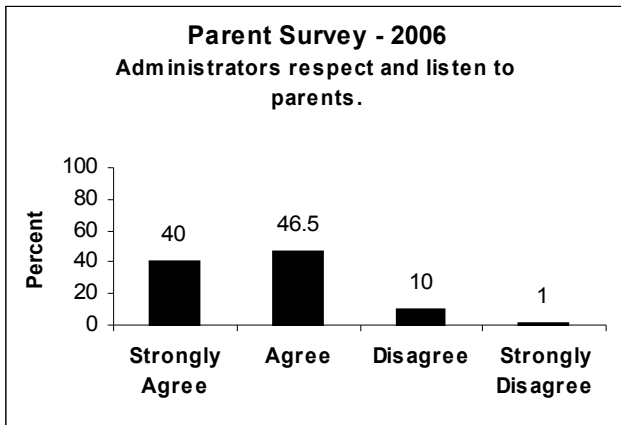
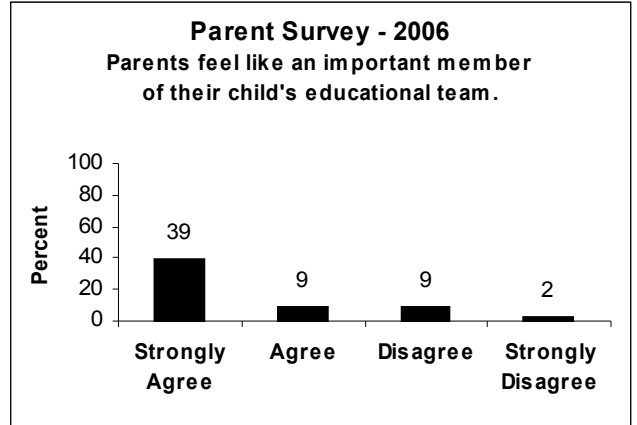
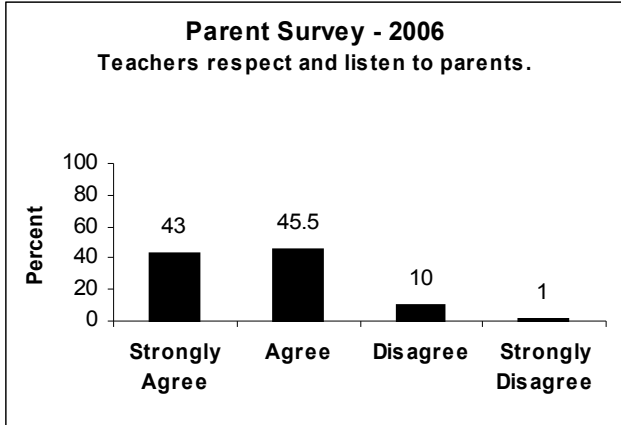
The data displayed in the graphs was collected in August 2006. The sample size was 99 surveys which represents 77% of the student population



# Parent Survey

## 2006 Results

The data displayed in the graphs was collected in August 2006. The sample size was 99 surveys which represents 77% of the student population.



## READING

For most deaf students, American Sign Language (ASL), is their first language and English is taught as a second language. The Kansas School for the Deaf has adopted a bilingual approach to teaching reading, focusing on the development of a strong first language and through that first language teaching reading as a second language. It is a time consuming process, which is complicated by the inability for most deaf students to access phonics, one of the primary building blocks to reading instruction. While the process of teaching reading may be different for deaf children, our goal is the same, to develop in all of our children the reading skills necessary to access the same content as their general-education peers.

### Assessments

To assess progress in reading English print the following assessments were used and reported on in this document.

- Stanford Achievement Test – Reading Comprehension Subtest
- Stanford Achievement Test – Reading Vocabulary Subtest
- Kansas State Reading Assessment – Grades 3-8 and High School
- Star Reading Assessment – Grades 1 – 12
- Fairview Multiple Meanings Assessment – Grades 1 – 6
- Measures of Academic Progress (MAP)

### Disaggregation

Whenever the population was large enough, (at least 10 students per group), data was disaggregated for three different variables, by *gender*, by *race/ethnicity*, and by *early access to language*. A student was considered to have early access to language if one or more of their parents were deaf or fluent in sign language at the time of their birth. Data is not disaggregated by socio-economic status since KSD cannot identify this group.

## **Stanford Achievement Test General Information**

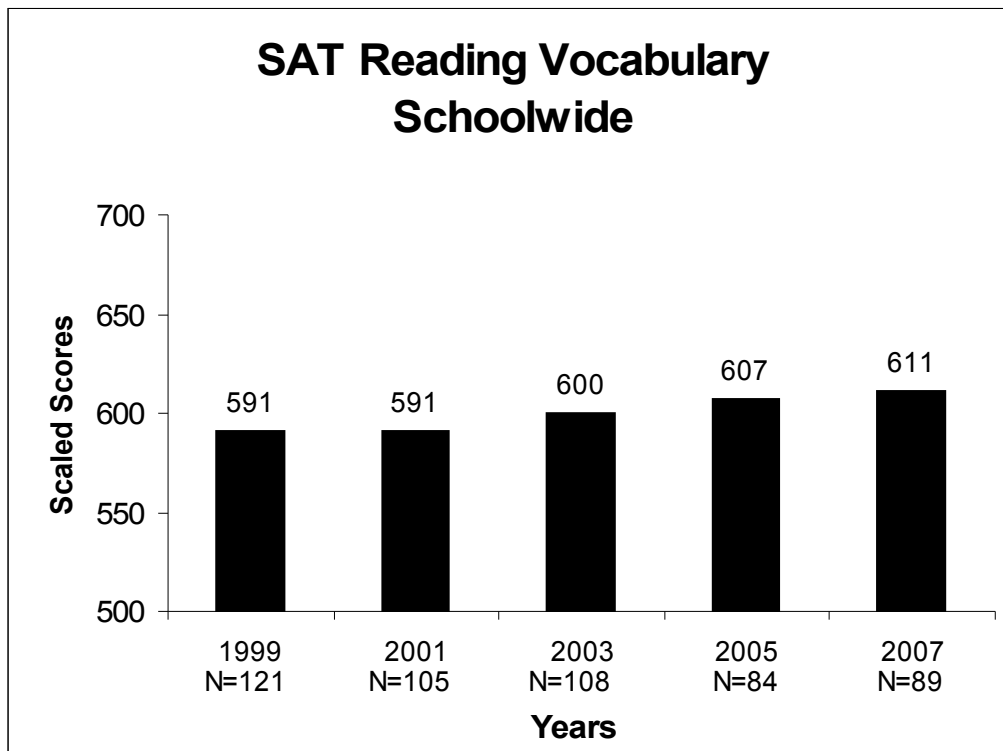
The Stanford Achievement Test (SAT) is a national, norm-referenced test given to KSD students every two years. Students are given the 9<sup>th</sup> Edition, which has been normed on deaf students nationwide. The SAT test has eight levels with students being assigned a level based on a screening test or previous performance. Since the assessment is given every two years, there are no 2008 scores.

The SAT test provides a variety of scores for interpretation, raw scores, grade equivalent scores, scaled scores, and age-based percentile ranks. In order to measure progress over different test levels, the **scaled scores** will be used in this report. A **scaled score** is comparable over different test levels. Scaled scores can be used to measure student growth and can be averaged for groups of students. **Scaled scores are not** equivalent across content areas. For example a 610 scale score in reading comprehension is not equivalent to a 610 in math problem solving.

**Stanford Achievement Test  
Reading Vocabulary Subtest  
1997 - 2007**

The Reading Vocabulary Subtest measures the following components:

- Synonyms
- Multiple Meanings
- Context



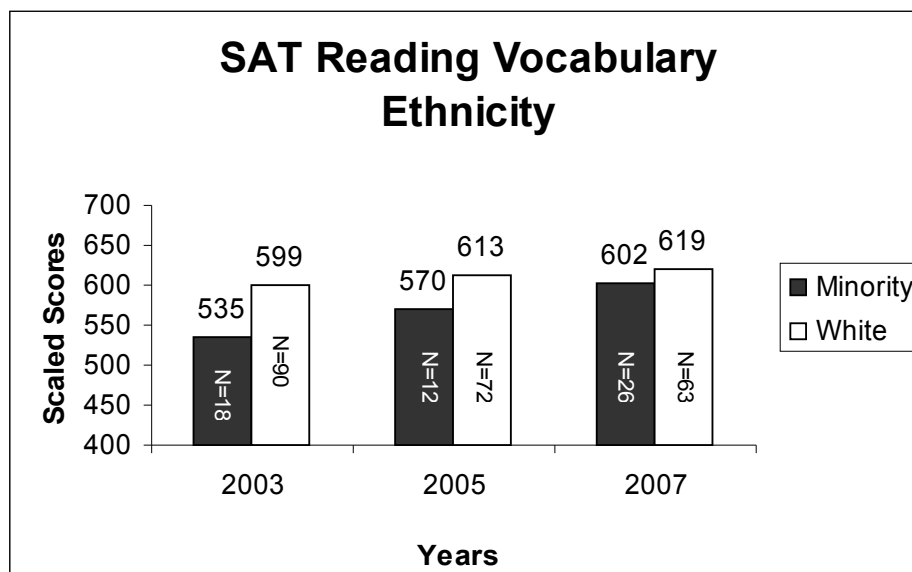
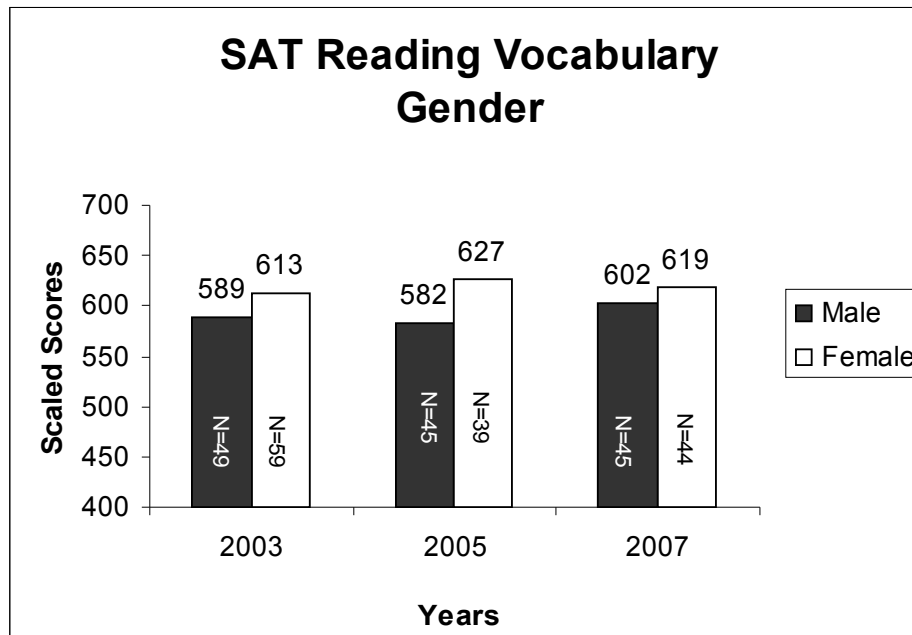
From 1997 to 2007, there has been gradual improvement in reading vocabulary scaled scores.

# Stanford Achievement Test

## Reading Vocabulary

### Disaggregation

The SAT Reading Vocabulary data was disaggregated for three different variables, by *gender*, by *race/ethnicity*, and by *early access to language*. A student was considered to have early access to language if one or more of their parents were deaf or fluent in sign language at the time of their birth.

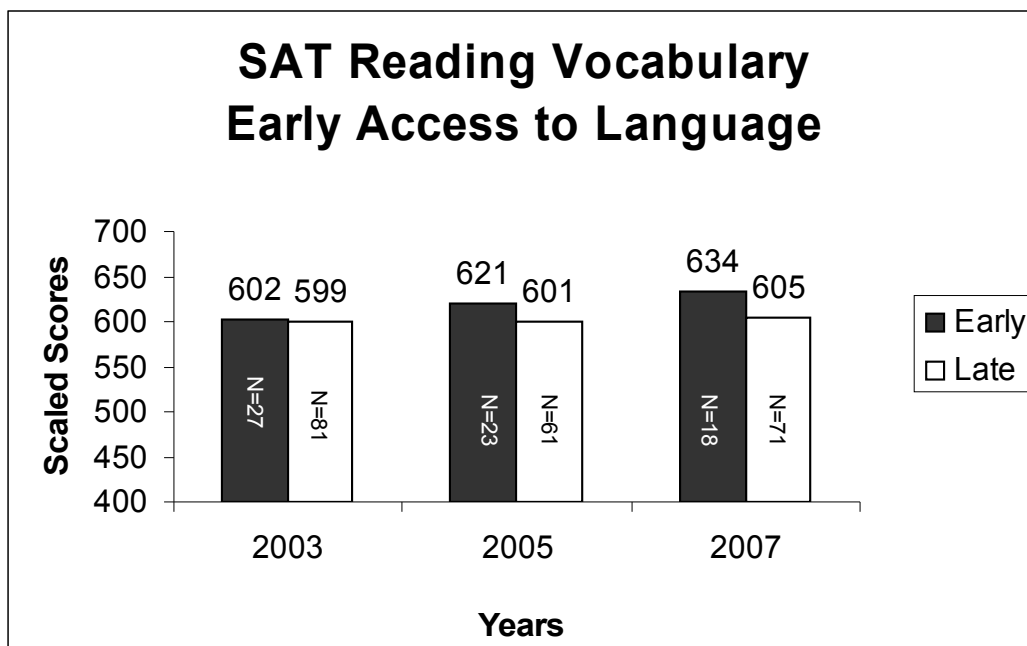


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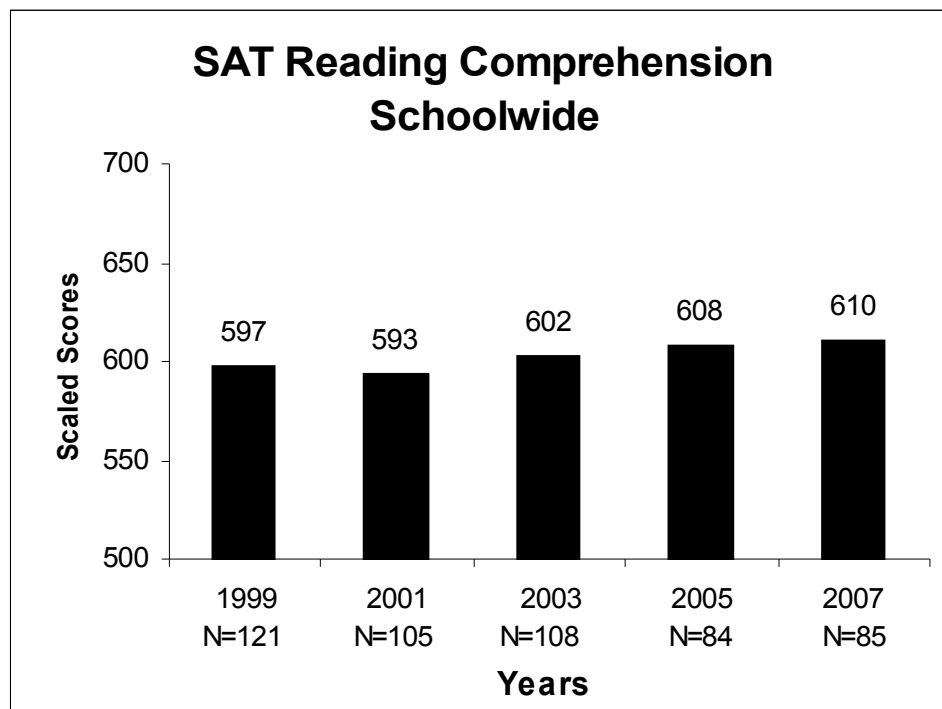
# Stanford Achievement Test

## Reading Comprehension Subtest

### 1997 – 2007

The Reading Comprehension Subtest measures the following reading components:

- Recreational Reading
- Textual Reading
- Functional Reading
- Initial Understanding
- Interpretation
- Critical Analysis
- Process Strategies



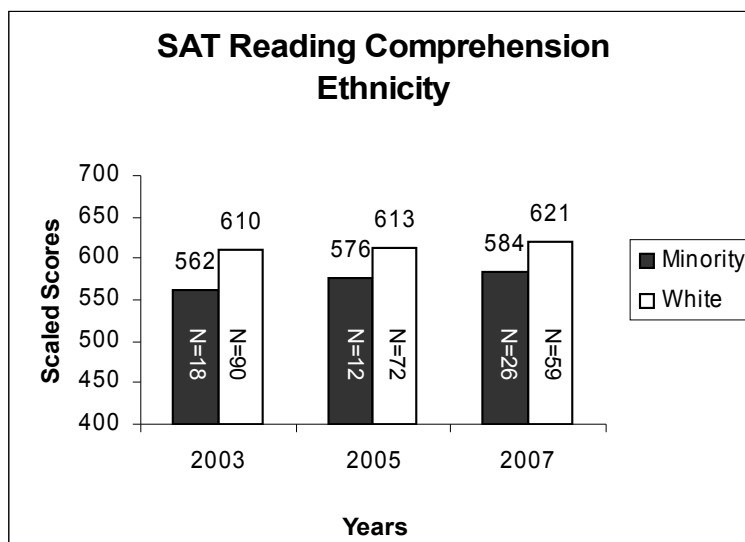
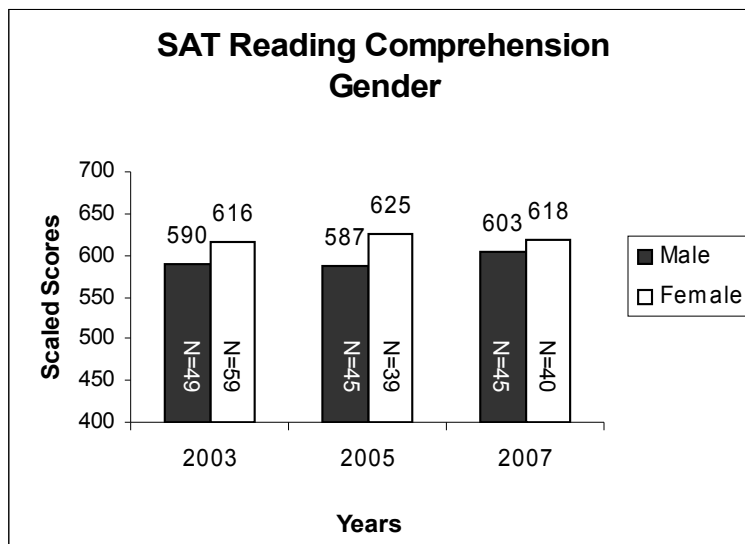
From 1999 through 2001 scores were flat. Since 2001, there has been a gradual improvement in the reading comprehension scaled scores.

# Stanford Achievement Test

## Reading Comprehension

### Disaggregation

The SAT Reading Comprehension data was disaggregated for three different variables, by *gender*, by *race/ethnicity*, and by *early access to language*. A student was considered to have early access to language if one or more of their parents were deaf or fluent in sign language at the time of their birth.

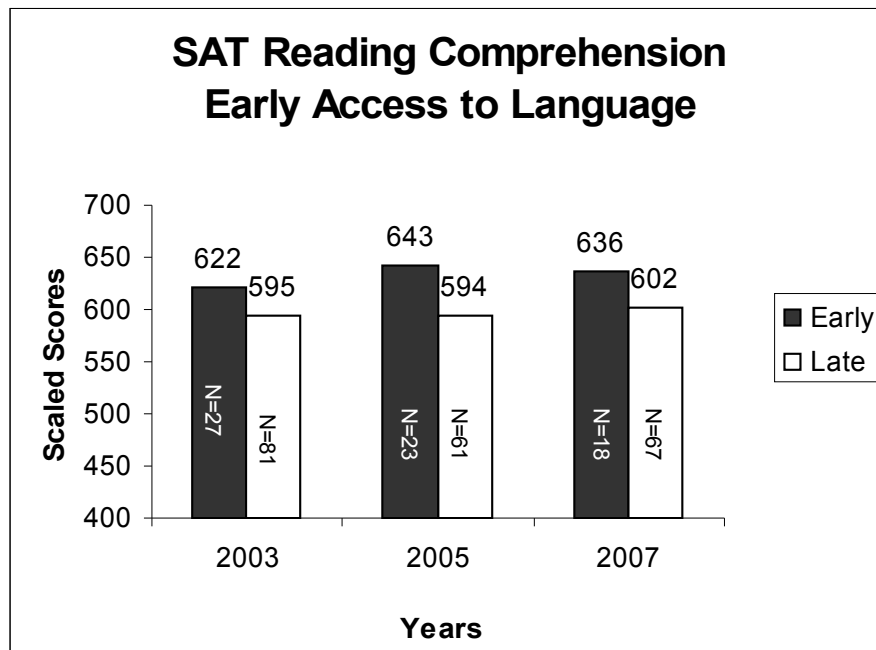


# Stanford Achievement Test

## Reading Comprehension

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The SAT Reading Comprehension data was disaggregated for three different variables, by *gender*, by *race/ethnicity*, and by *early access to language*. A student was considered to have early access to language if one or more of their parents were deaf or fluent in sign language at the time of their birth.



## Kansas State Reading Assessment

### General Information

The Kansas Reading Assessment is an annual assessment based on the Kansas Curricular Standards for Reading. The Kansas Curricular Standards were developed by the Department of Education to assist schools in developing their reading curriculums.

The State Reading Assessment is given to all students, grades 3 through 8, and one grade in high school, which is locally determined to be the student's "*End of opportunity to learn*". In 2008, the 10<sup>th</sup> grade took the State Reading assessment. Reading Comprehension and Literary Skills are the major focus of the test. The assessment item format is multiple choice with four text types assessed at all tested grade levels: Narrative, Expository, Persuasive, and Technical.

The state has developed three assessment options, General, KAMM, and Alternate. The General and KAMM assessment measures indicators from the General Reading Standards. The KAMM assessment, while still measuring **grade level** objectives, provides students with additional supports (fewer choices, shorter passages). The Alternate Assessment measures indicators from the Extended Reading Standards. The decision as to which assessment is appropriate for each student is made by the IEP team.

We combined data from both the General and the KAMM Assessments in this report. Since a new state assessment was developed for 2006, previous year's data cannot be compared.

# Kansas State Reading Assessment

## General Information

This report graphs the state reading data in two ways, by **Performance Category** and by **Percent Correct**.

### **Performance Category**

Based on their scores, students are assigned one of five performance categories, Academic Warning, Approaching Standard, Standard, Exceeds Standard, or Exemplary. We grouped the scores into two graphs, the percent scoring **Standard and Above** and the percent scoring **Below Standard**.

**Standard and Above** – This includes the percentage of students scoring either Standard, Exceeds Standard, or Exemplary.

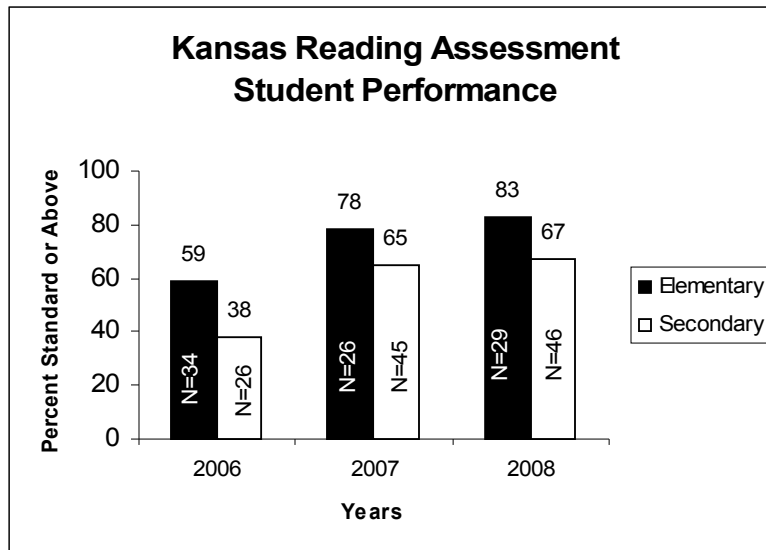
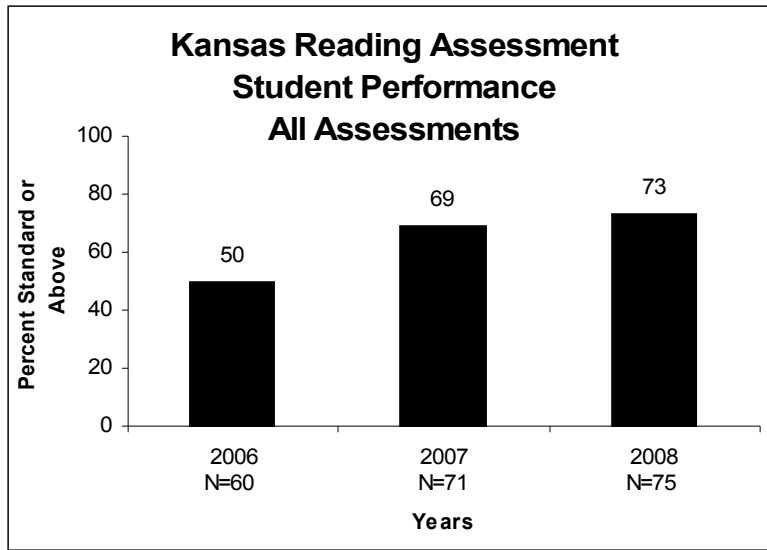
**Standard and Below** - This includes the percentage of students scoring either Approaching Standard or Academic Warning.

### **Percent Correct**

Those students taking either the General or KAMM assessments are given an overall reading percent score. For the purpose of this report, we graphed the average percent score for the KAMM and General assessments. This data is not available for students taking the Alternate assessment.

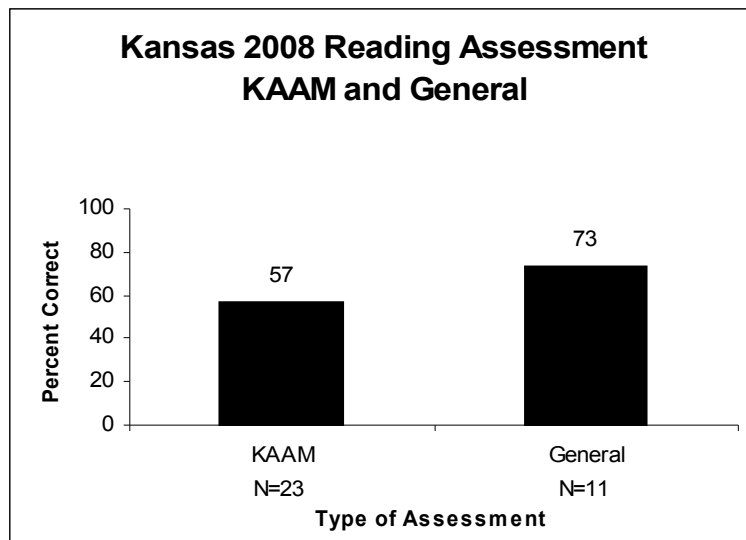
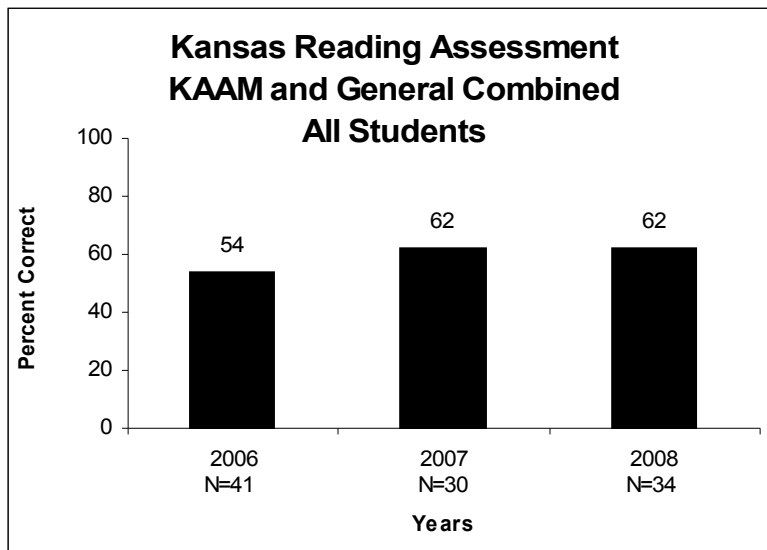
## Kansas State Reading Assessment 2008 Results

The following graphs show the percentage of students who were classified as Standard or above on the 2008 State Reading assessment. The data includes students who were classified as Standard, Exceeds Standard, and Exemplary. These graphs include all three assessments, General, KAMM, and Alternate.



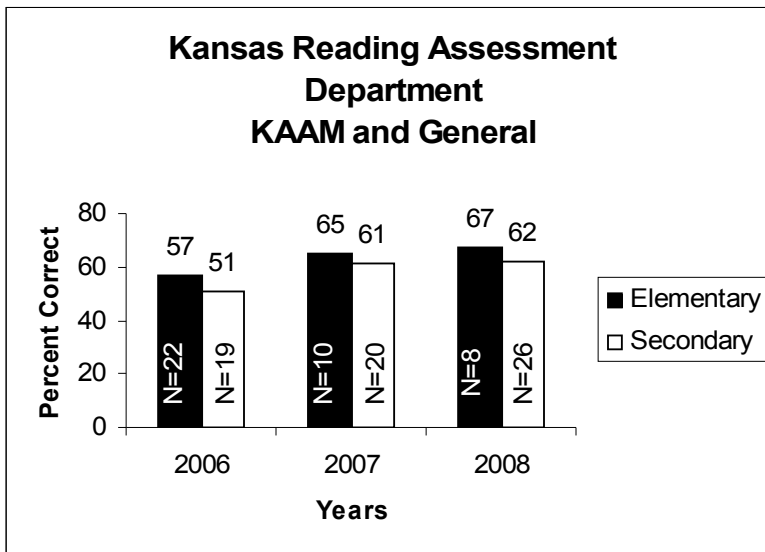
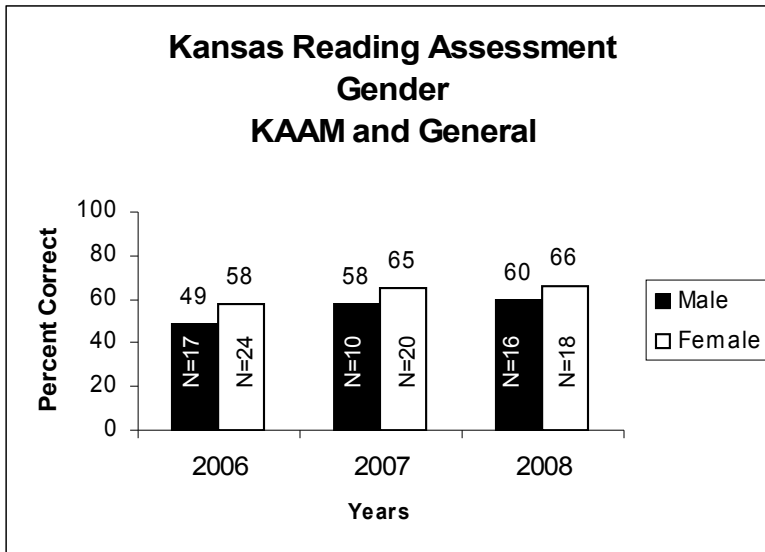
# Kansas State Reading Assessment 2008 Results

The following graphs show the average reading score on the 2008 State Reading assessment. Those students taking either the General or KAMM assessments are given an overall reading percent score. For the purpose of this report, we graphed the average percent score for the KAMM and General assessments. This data is not available for students taking the Alternate assessment.



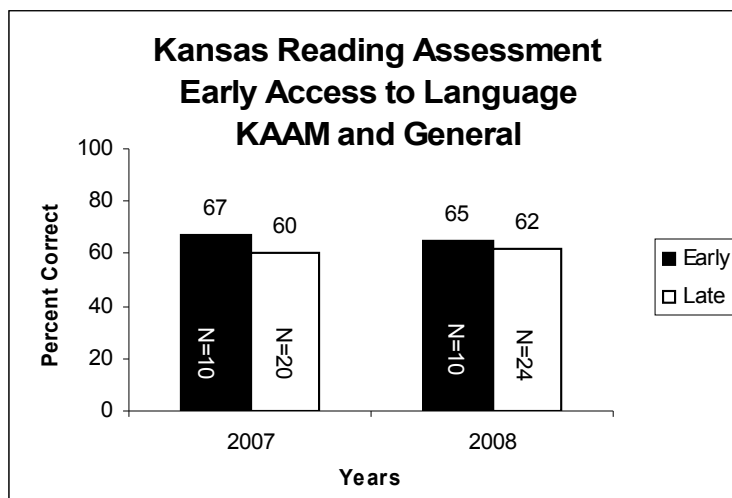
## Kansas State Reading Assessment 2008 Disaggregation

The State Reading assessment scores are disaggregated by *department*, *gender*, and *early access to language*. A student was considered to have early access to language if one or more of their parents were deaf or fluent in sign language at the time of their birth. There were not enough students in the *Ethnic* subgroup to make a valid disaggregation.



## Kansas State Reading Assessment 2008 Disaggregation

The State Reading assessment scores are disaggregated by *department*, *gender*, and *early access to language*. A student was considered to have early access to language if one or more of their parents were deaf or fluent in sign language at the time of their birth. There were not enough students in the *Ethnic* subgroup to make a valid disaggregation.



## **KELPA Reading Assessment**

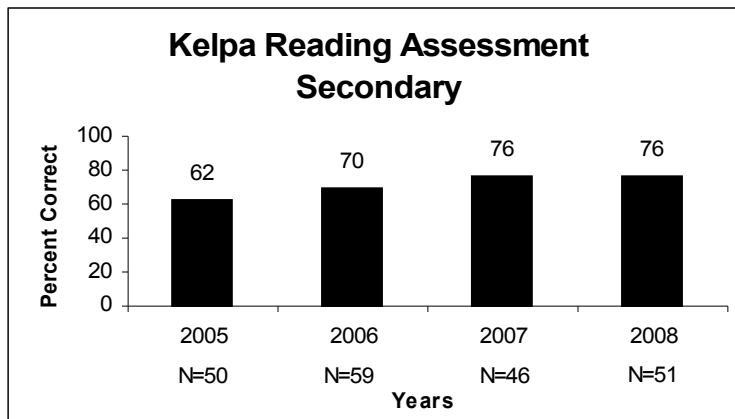
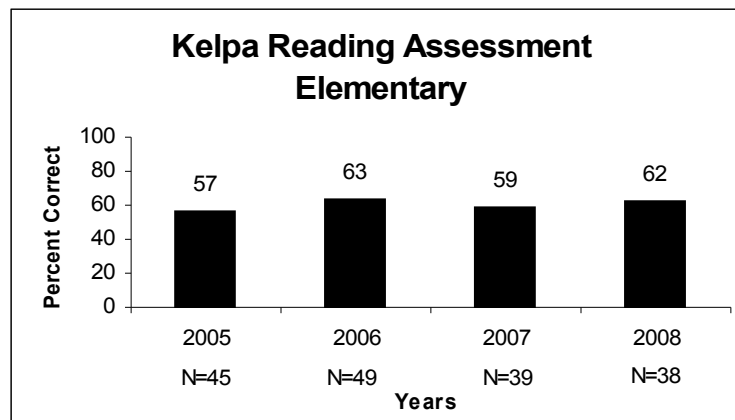
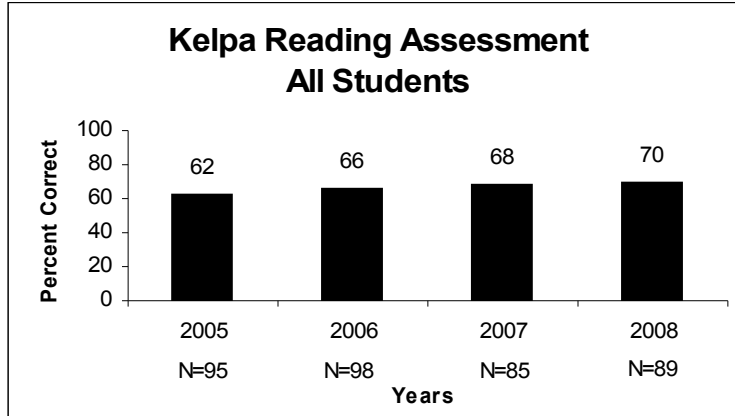
### **General Information**

The Kansas English Learning Proficiency Assessment (KELPA) was developed in 2004-05 by the State of Kansas to measure the proficiency of English Language Learners (ELL) statewide. While KSD students are not formally classified as ELL students, they share many of the same characteristics including a primary language (American Sign Language) that is different from English. For that reason, the state allowed us to give the Reading portion of the KELPA test to our students. All students, grades K – 12, working off the General or ESOL Reading Standards were tested. Those students taught off the Extended Standards were not tested.

The reading portion of the KELPA includes 15 – 20 questions that measure reading vocabulary and comprehension. Students took one of four forms, K-2, 3-5, 6-8, and 9-12. The tests are administered in the spring and data is reported as a percent correct.

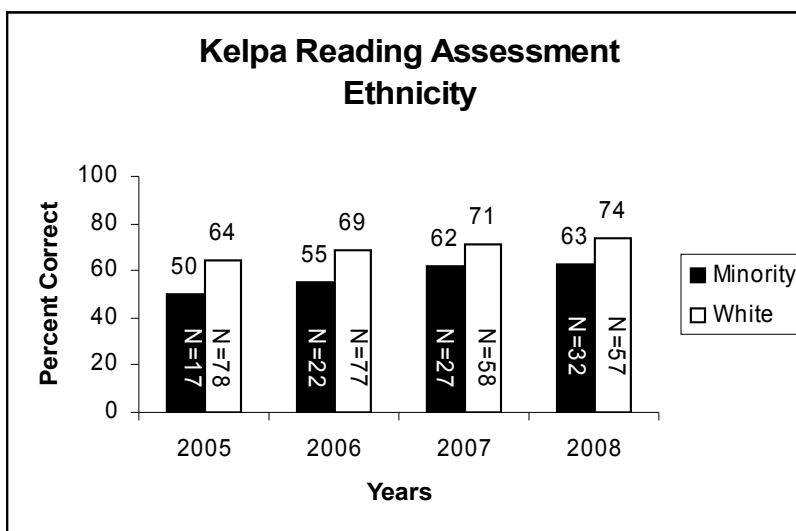
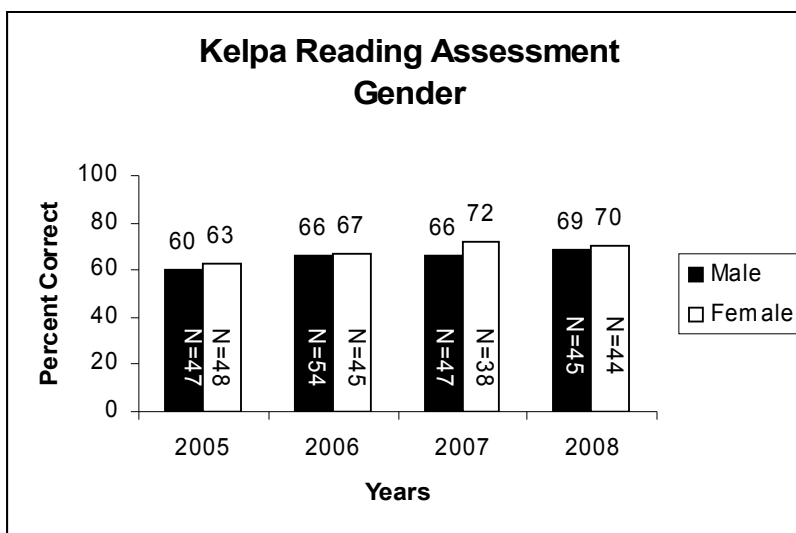
# KELPA Reading Assessment

## All Students



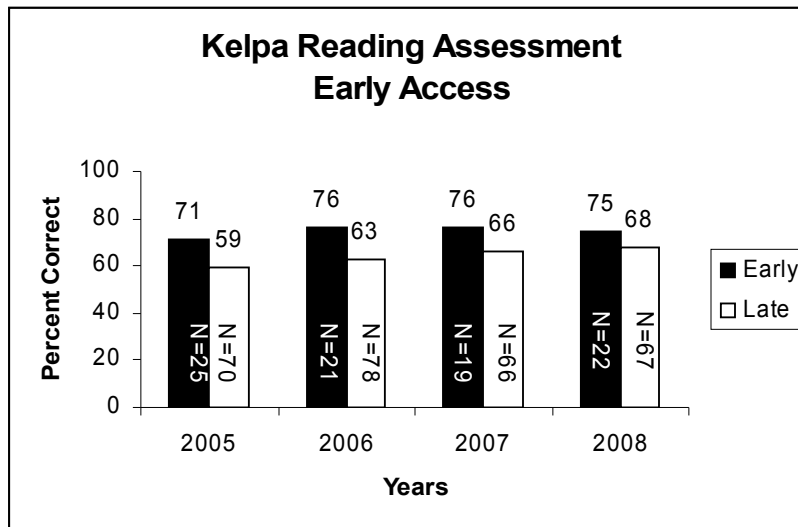
## KELPA Reading Assessment Disaggregation

The KELPA Reading data is disaggregated by three criteria, **gender**, **ethnicity**, and **early access to language**. A student is considered to have early access to language if when they were born, they had at least one parent who was either deaf or fluent in sign language.



## KELPA Reading Assessment Disaggregation

The KELPA Reading data is disaggregated by three criteria, **gender**, **ethnicity**, and **early access to language**. A student is considered to have early access to language if when they were born, they had at least one parent who was either deaf or fluent in sign language.



## **Star Reading Assessment**

### **General Information**

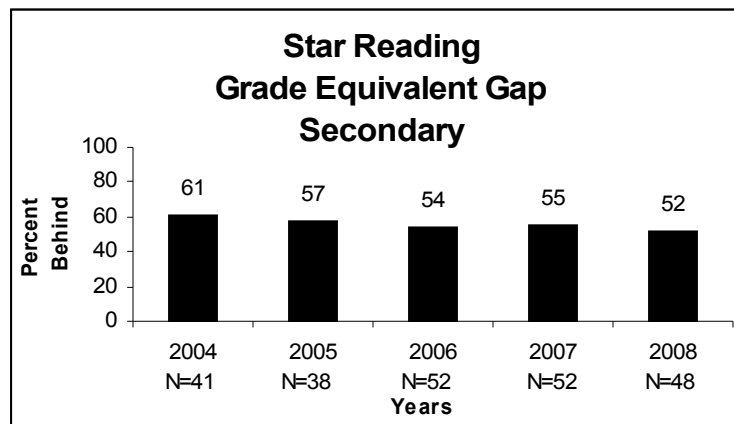
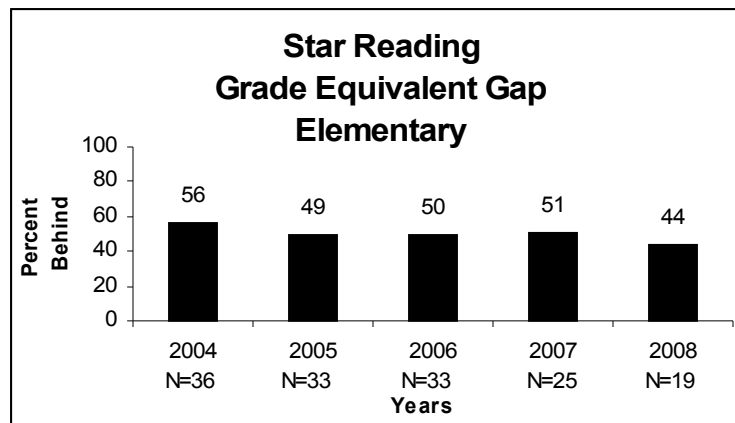
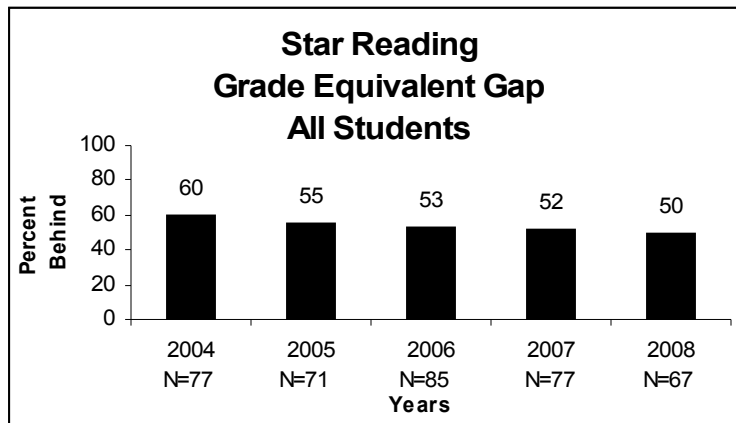
The Star Reading Assessment is a computerized assessment, which measures reading vocabulary in context. The assessment is given twice a year, in the fall and spring, to all students with a minimum reading vocabulary of 200 words. The assessment is 25 questions long and has an internal branching algorithm, which adjusts the difficulty of the vocabulary according to the student's performance throughout the test. The more questions the student gets correct, the more difficult the words become. Conversely, the more questions the student misses, the easier the words become.

Student data includes a scaled score, grade equivalence, instructional reading level, percentile ranking, and zone of proximal development (ZPD). For the purposes of this document, grade equivalence is displayed from the spring assessment. The graphs display **the average grade equivalence gap** between our students and the general education population. We selected grade equivalence since one of the goals of the vocabulary interventions is to reduce the vocabulary gap between our students and their hearing peers.

Data from students taught off the extended standards is not included in the graphs. The reason is that students taught from the extended standards work with a unique set of functional vocabulary not measured by the Star Reading Assessment.

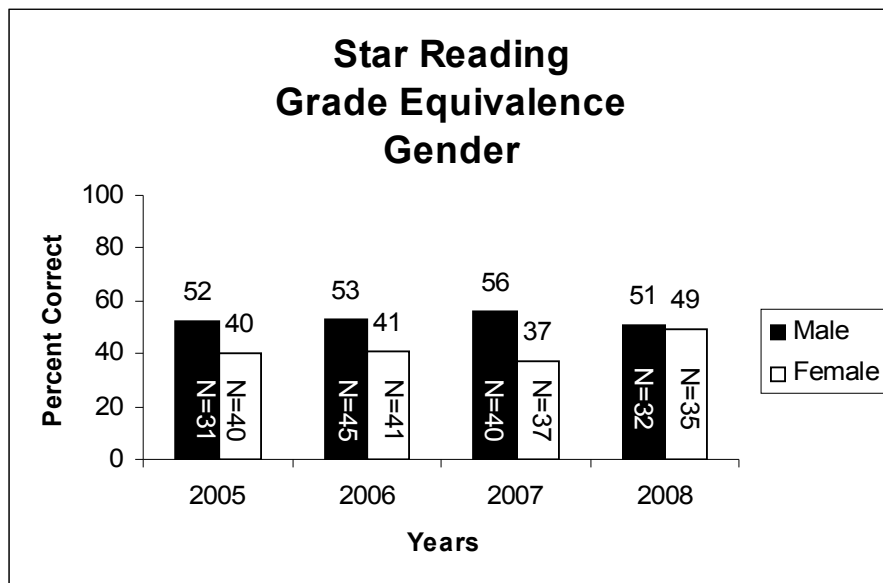
## Star Reading Assessment Grade Equivalence

This graph displays the percentage that our students are behind their hearing peers in Reading Vocabulary as measured by the Star Reading Assessment.

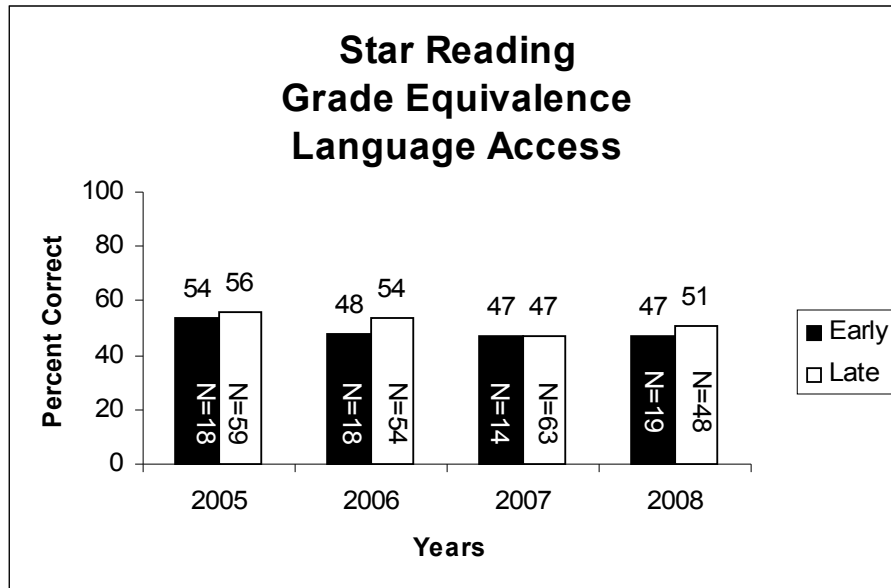
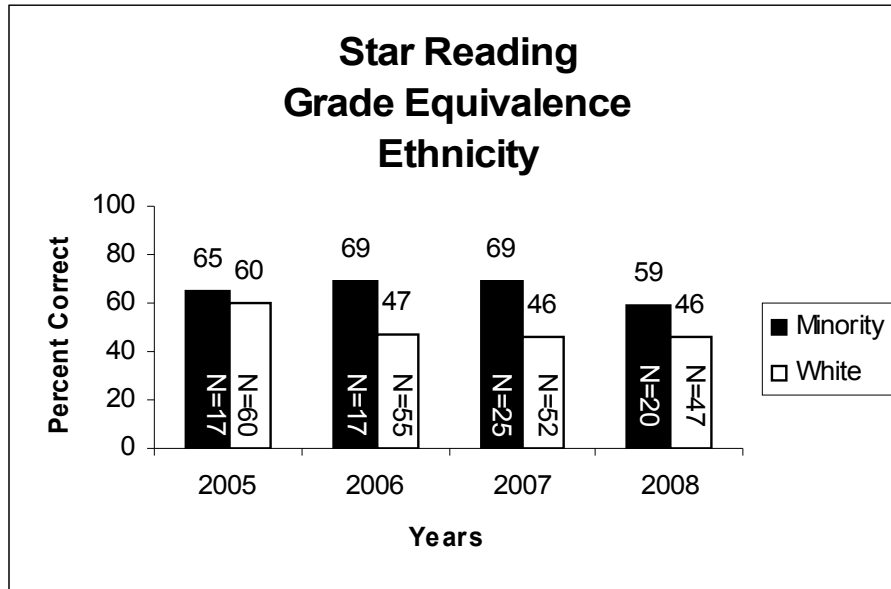


## Star Reading Assessment Disaggregation

The Star Reading data is disaggregated by three criteria, **gender**, **ethnicity**, and **early access to language**. A student is considered to have early access to language if when they were born, they had at least one parent who was either deaf or fluent in sign language.



## Star Reading Assessment Disaggregation



## **Fairview Multiple Meanings Assessment**

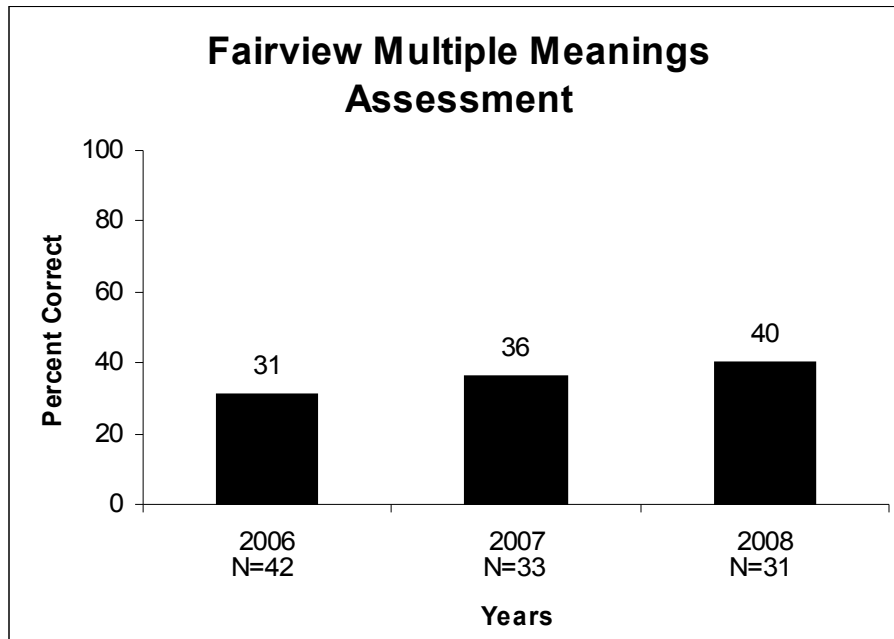
### **General Information**

Understanding multiple meanings is a critical skill in reading comprehension. Fairview Learning has developed a program for teaching the multiple meanings of the Dolch vocabulary words using American Sign Language. The program teaches the multiple meanings of all Dolch words preprimer through third grade.

The KSD Reading Committee developed a local criterion referenced assessment based on the Fairview Dolch program. The assessment measures the student's knowledge of the multiple meanings of 25 vocabulary words. Five words each from the Dolch preprimer, primer, 1st grade, 2nd grade, and 3rd grade make up the assessment. The 25 words represent 81 different multiple meanings.

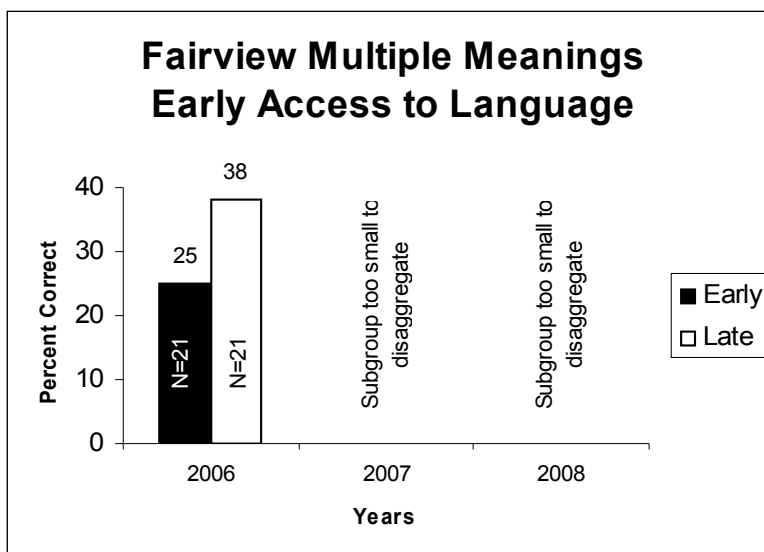
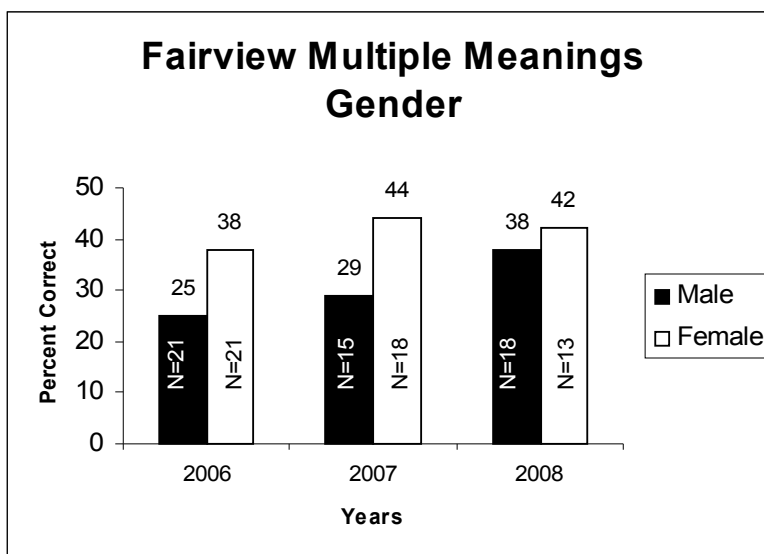
Students in grades 1 – 6 were tested in the fall of the 2005 to obtain a baseline score. They were asked to identify as many of the 81 multiple meanings as they knew. Students are tested annually to measure progress. Scores are disaggregated by gender and early access to language.

# Fairview Multiple Meanings Assessment 2008 Results



## Fairview Multiple Meanings Assessment 2008 Results

The Fairview data is disaggregated by three criteria, *gender*, *ethnicity*, and *early access to language*. A student is considered to have early access to language if when they were born, they had at least one parent who was either deaf or fluent in sign language. The testing population was not large enough in 2008 to disaggregate by *ethnicity or early access to language*.



# Measures of Academic Progress (MAP) Assessment

## General Information

The Measures of Academic Progress (MAP) are state-aligned computerized adaptive tests that reflect the instructional level of each student and measures growth over time. The MAP assessment was developed by the Northwest Education Association (NWEA).

The MAP test provides results that can be used to:

- Monitor academic growth over time
- Make data-driven decisions at the classroom and school level.
- Place new students into appropriate instructional programs.

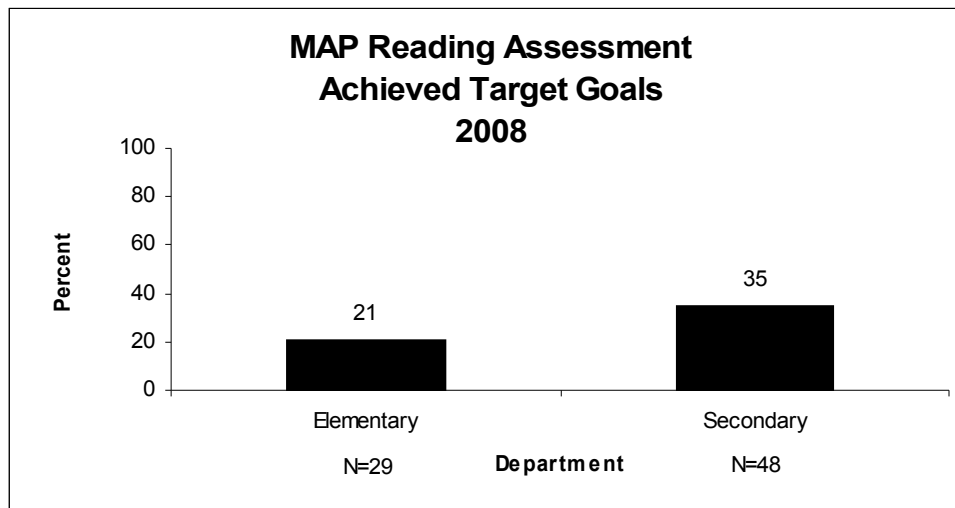
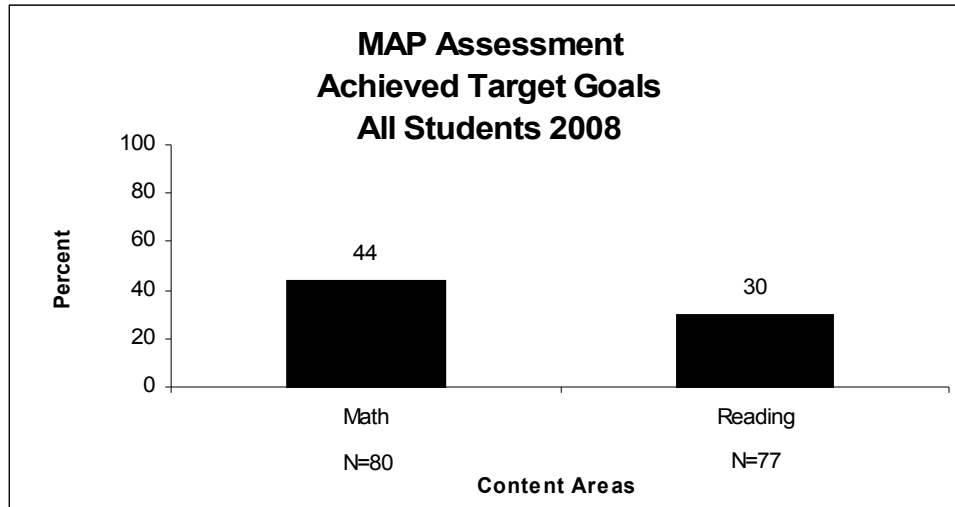
The assessment itself is unique in that it adapts to the student's ability, accurately measuring what a child know and needs to learn. In addition, MAP tests measure academic growth over time, independent of grade level or age.

Map scores are reported in RITs or Rasch units. The RIT scale is an equal interval achievement scale that starts at 150 and goes to 300. The RIT scale allows educators to monitor growth accurately much like a ruler measures physical growth. The student's RIT score is the place on the scale where they can answer questions with 50% accuracy. The RIT scale is not grade level dependent. Any student at any grade level can attain any RIT score.

In 2005, a large group of students nationally were given the MAP Assessment to develop grade level norms from 2<sup>nd</sup> through 10<sup>th</sup> grades. The norm RIT scores are provided by NWEA and give a median score and average growth (Fall to Spring) for each grade level 2<sup>nd</sup> through 10<sup>th</sup>.

We graphed the data to compare the growth of our students from Fall to Spring with the growth of the norm group. We represented this growth on the graphs as a percentage of students who achieved the norm growth.

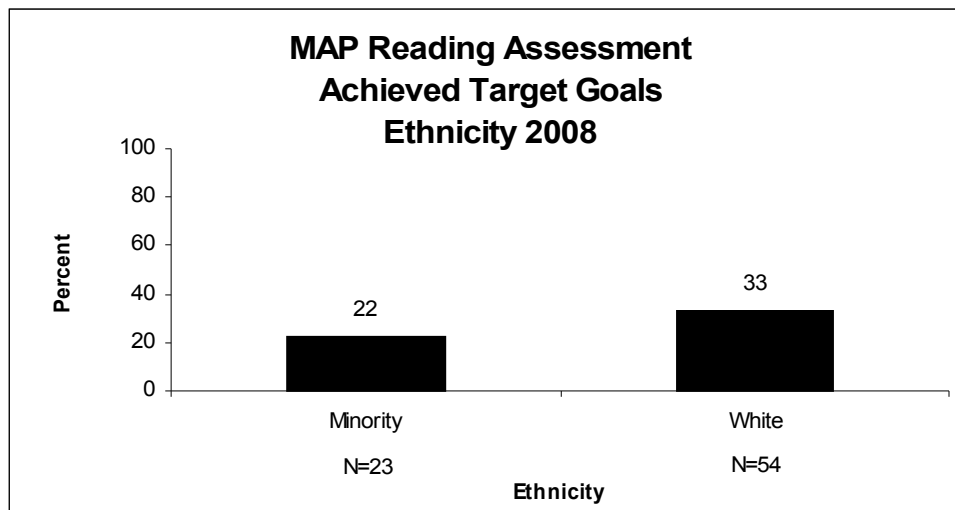
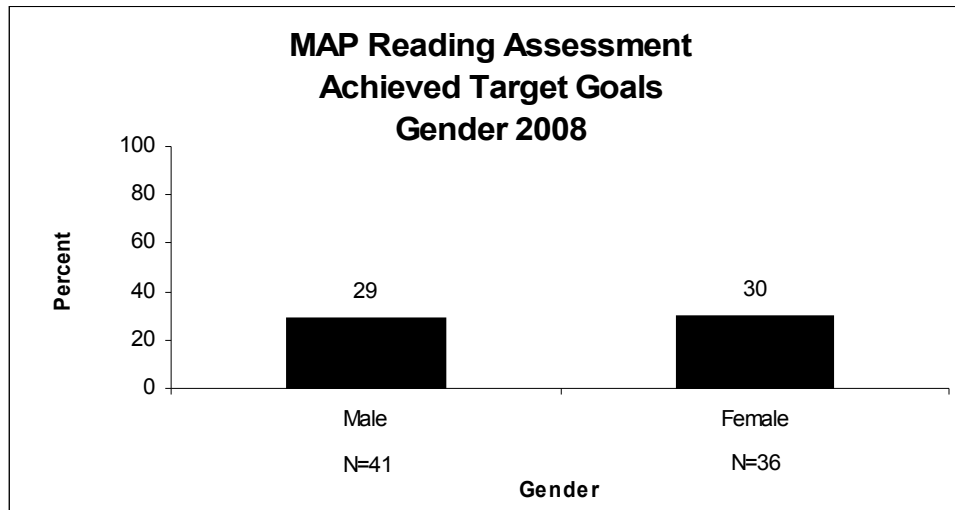
## Measures of Academic Progress (MAP) Assessment 2008 Results



The data indicates that in Reading 30% of our students achieved at or above the norm growth from Fall 2007 to Spring 2008. In Mathematics 44% of our students achieved at or above the norm growth.

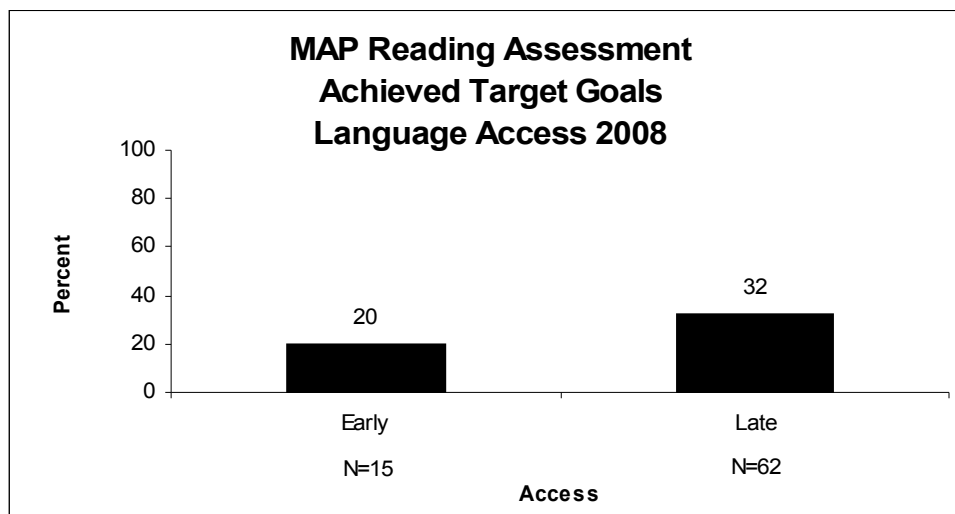
## Measures of Academic Progress (MAP) Assessment 2008 Results

The MAP data is disaggregated by three criteria, **gender**, **ethnicity**, and **early access to language**. A student is considered to have early access to language if when they were born, they had at least one parent who was either deaf or fluent in sign language.



## Measures of Academic Progress (MAP) Assessment 2008 Results

The MAP data is disaggregated by three criteria, **gender**, **ethnicity**, and **early access to language**. A student is considered to have early access to language if when they were born, they had at least one parent who was either deaf or fluent in sign language.



# MATHEMATICS

The emphasis in mathematics has shifted from rote computation to application and problem solving. Our students are expected to not only perform math procedures but to apply those procedures to solve real world problems. As the emphasis shifts to application and problem solving, literacy skills (reading and writing) have become an integral part of the math curriculum. Students need to be able to read and write mathematics as well as perform pencil and paper calculations. They need natural and early exposure to the language of math in both ASL and English in order to develop the math skills needed to solve higher-level problems.

## Assessments

To assess student's math skills, the following assessments are reported on in this document.

- Stanford Achievement Test
- Kansas State Math Assessment – Grades 3 – 8 and 10th
- KSD Curriculum-Based Assessment
- Measures of Academic Progress (MAP)

## Disaggregation

Whenever the testing population was large enough, (at least 10 students per group), data was disaggregated for three different variables, by *gender*, by *race/ethnicity*, and by *early access to language*. A student was considered to have early access to language if one or more of their parents were deaf or fluent in sign language at the time of their birth. Data is not disaggregated by socio-economic status since KSD cannot identify this group.

## Stanford Achievement Test General Information

The Stanford Achievement Test (SAT) is a national, norm-referenced test given to KSD students, 3<sup>rd</sup> through 12<sup>th</sup> grade. KSD students are given the 9<sup>th</sup> Edition, which has been normed on deaf students nationwide. Prior to 2003, the SAT test was given annually. Starting in 2003, the test is given every two years. Since the assessment is given every two years, there are no 2008 scores.

### SAT Subtests and Levels

The SAT Math test has 11 different content levels, from P1 – T3, which correspond to curriculum material specifically related to different grade levels in educational programs for hearing students. Students are assigned a level based on a screening test. The test levels and their corresponding grade levels are listed below.

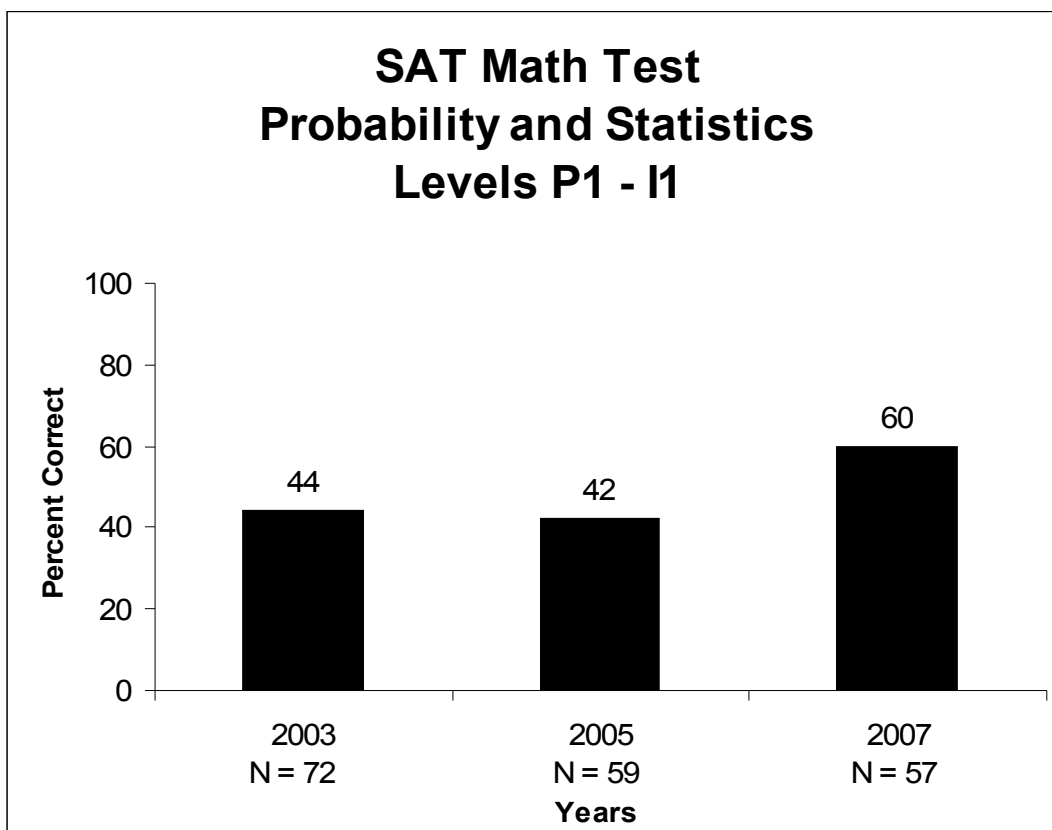
Test Level	Grade Levels	Test Level	Grade Levels
P1	1.5 – 2.5	A1	7.5 – 8.5
P2	2.5 – 3.5	A2	8.5 – 9.5
P3	3.5 – 4.5	T1	9.0 – 9.9
I1	4.5 – 5.5	T2	10.0 – 10.9
I2	5.5 – 6.5	T3	11.0 – 12.9
I3	6.5 – 7.5		

### Content Clusters

For the purpose of monitoring our school improvement goal of improving graphing, probability, and statistics, we used three different content clusters contained in the SAT Math battery. For students taking the P1 through I1 levels, we reported their percent correct on a single, combined cluster, *Probability and Statistics*. For students taking the I2 – A2 levels, we reported their percent correct on two separate clusters, *Probability* and *Statistics*. The T1 – T3 levels do not report cluster data and therefore are not displayed in this document. Scaled scores are not available for content clusters so we displayed the mean percent correct scores for each cluster.

**Stanford Achievement Test  
Math Probability and Statistics  
Levels P1 – I1**

These graphs represent the Probability and Statistics cluster for all students who took the Primary 1, Primary 2, Primary 3, or the Intermediate 1 level test.

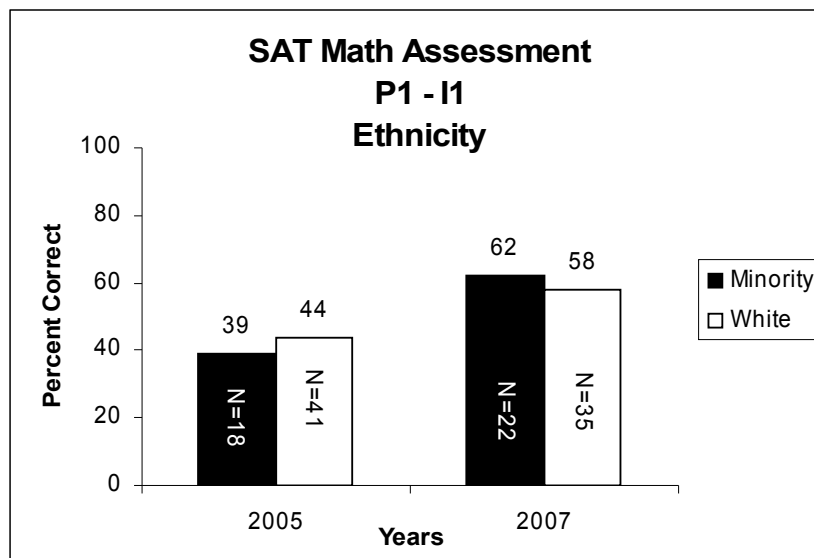
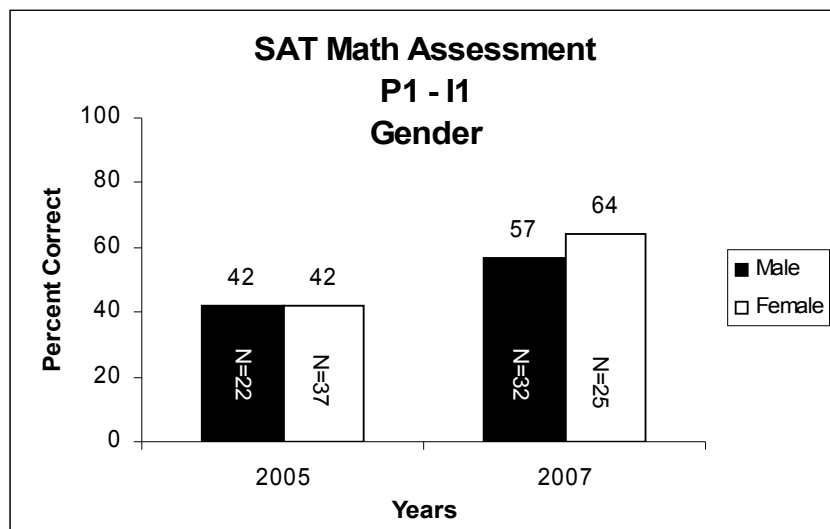


# Stanford Achievement Test

## Math Probability and Statistics P1 – I1

### Disaggregation

The SAT Math data was disaggregated for three different variables, by *gender*, by *race/ethnicity*, and by *early access to language*. A student was considered to have early access to language if one or more of their parents were deaf or fluent in sign language at the time of their birth.

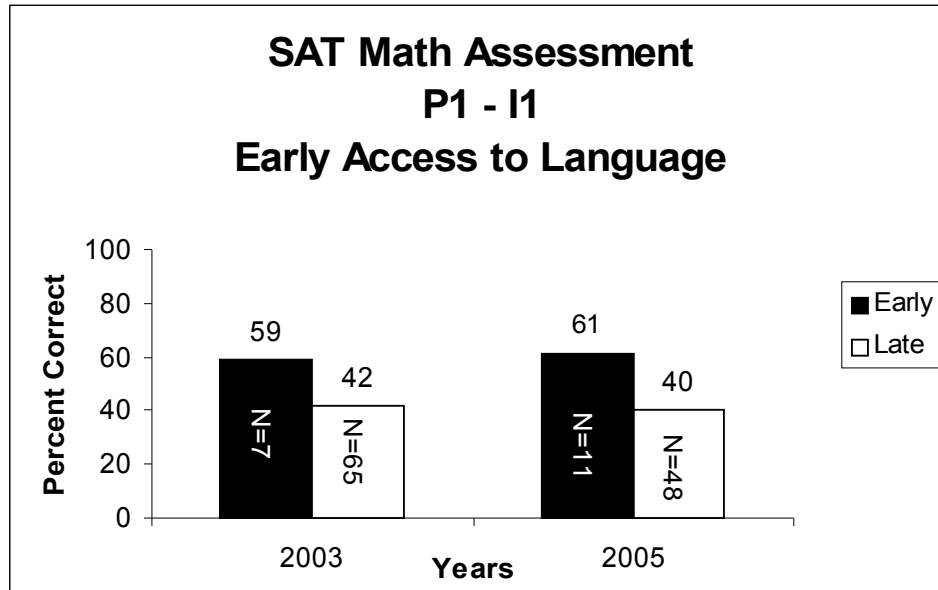


# Stanford Achievement Test

## Math Probability and Statistics P1 – I1

### Disaggregation

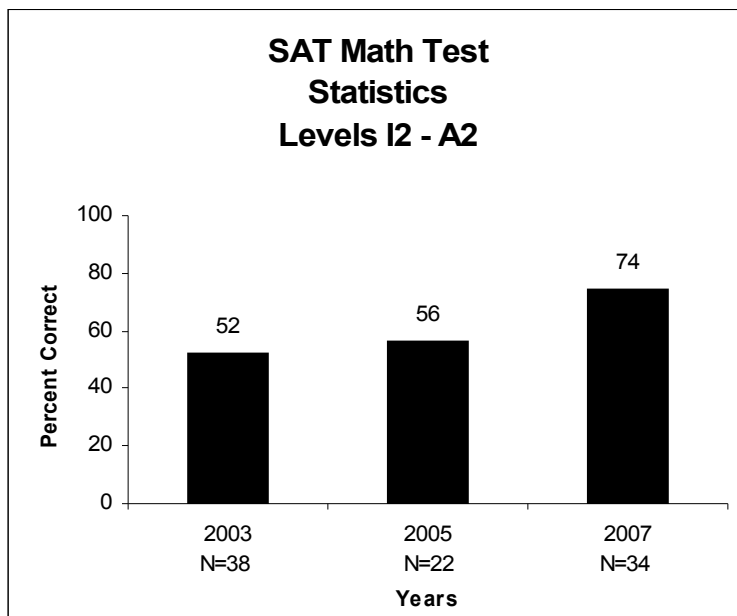
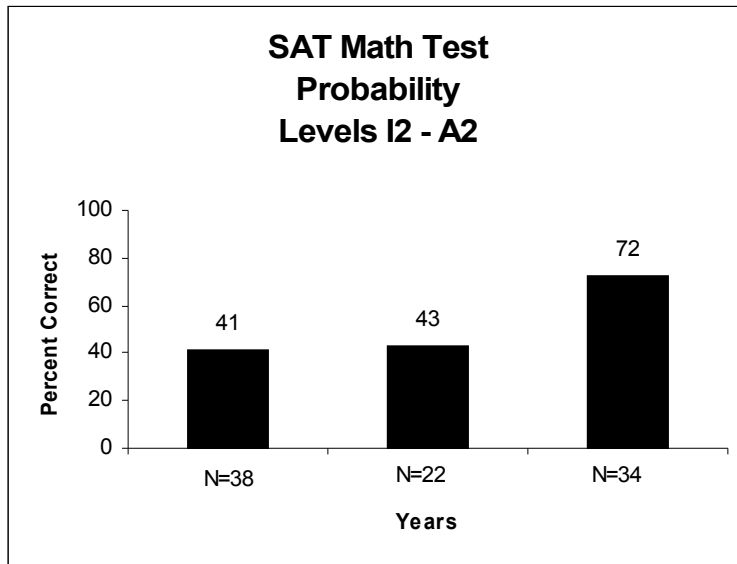
The SAT Math data was disaggregated for three different variables, by *gender*, by *race/ethnicity*, and by *early access to language*. A student was considered to have early access to language if one or more of their parents were deaf or fluent in sign language at the time of their birth.



In 2007, we were not able to disaggregate for early access to language since there were only 8 early access students who took a Level P1 – I1 SAT Math test. We only disaggregate groups of 10 or more students.

**Stanford Achievement Test**  
**Math Probability and Statistics**  
**Levels I2 – A2**

These graphs represent two separate clusters, Probability and Statistics, for all students who took the Intermediate 2, Intermediate 3, Advanced 1 or Advanced 2 level test.

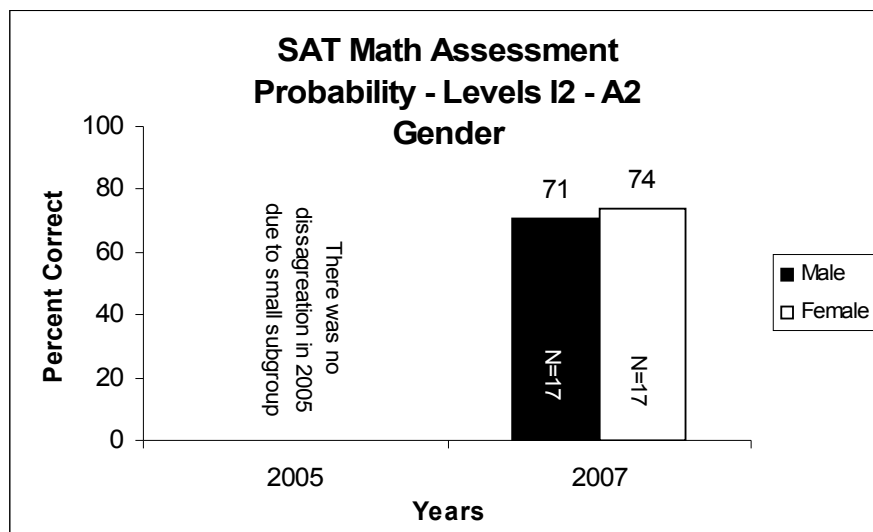
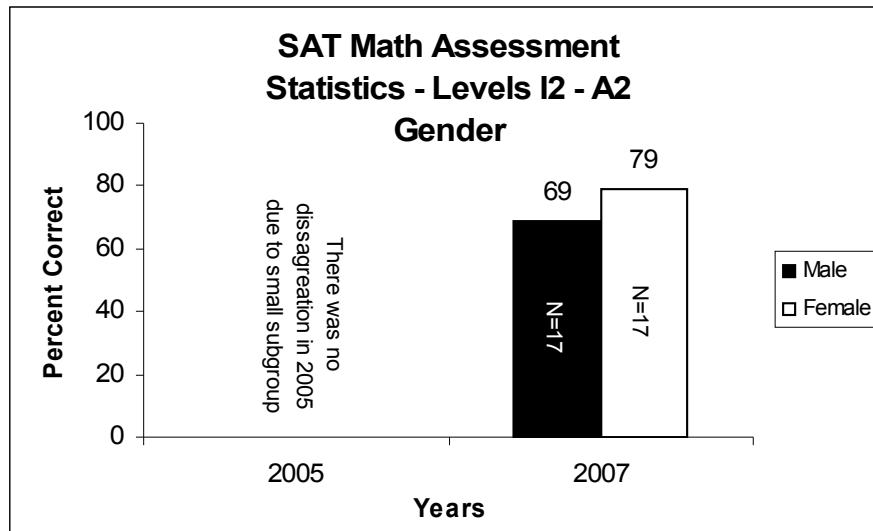


# Stanford Achievement Test

## Math Probability and Statistics I2 – A2

### Disaggregation

The SAT Math data for Probability and Statistics, Levels I2 – A2 was disaggregated only by *gender*. The *ethnic* and *early access* subgroups had less than 10 students each which makes any disaggregation invalid.



## **Kansas State Mathematics Assessment**

### **General Information**

The Kansas Mathematics Assessment is an annual assessment based on the Kansas Curricular Standards for Mathematics. The Kansas Curricular Standards were developed by the Department of Education to assist schools in developing their mathematics curriculums.

The State Mathematics Assessment is given to all students in grades 3 through 8 and one grade in high school, which is locally determined to be the student's "*End of opportunity to learn*". The assessment covers four areas, Number and Computation, Algebra, Geometry, and Data. Some test items are knowledge based (performing computations and procedures) while others are application based (applying the knowledge to solve problems).

The state has developed three assessment options, General, KAMM, and Alternate. The General and KAMM assessment measures indicators from the General Mathematics Standards. The KAMM assessment, while still measuring grade level objectives, provides students with additional supports (fewer choices, shorter passages). The Alternate Assessment measures indicators from the Alternate Mathematics Standards. The decision as to which assessment is appropriate is made by the IEP team.

# Kansas State Mathematics Assessment

## General Information

We graphed the students' data in two ways, by **performance category** and by **percent correct** on the data subtest.

### Performance Category

Based on their score, students are assigned one of five performance categories, Unsatisfactory, Basic, Proficient, Advanced, or Exemplary.

**Basic and Above** – This includes the percentage of students scoring either Basic, Proficient, Advanced, or Exemplary.

**Proficient and Above** - This includes the percentage of students scoring either Proficient, Advanced, or Exemplary.

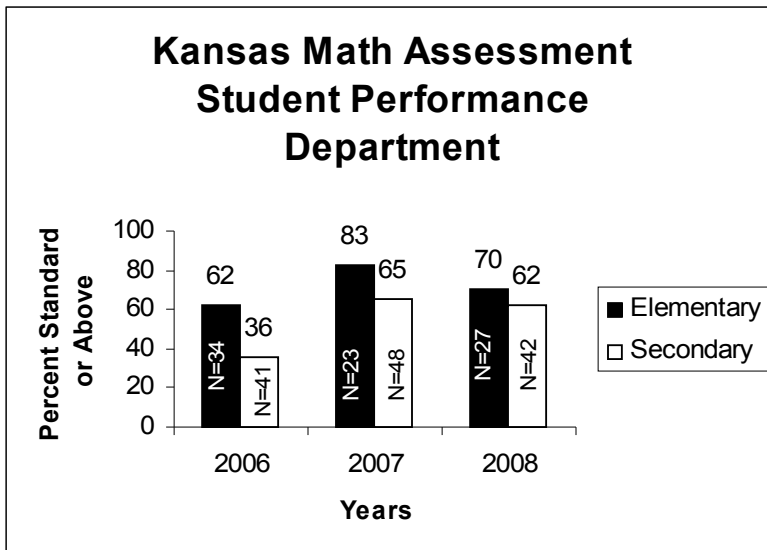
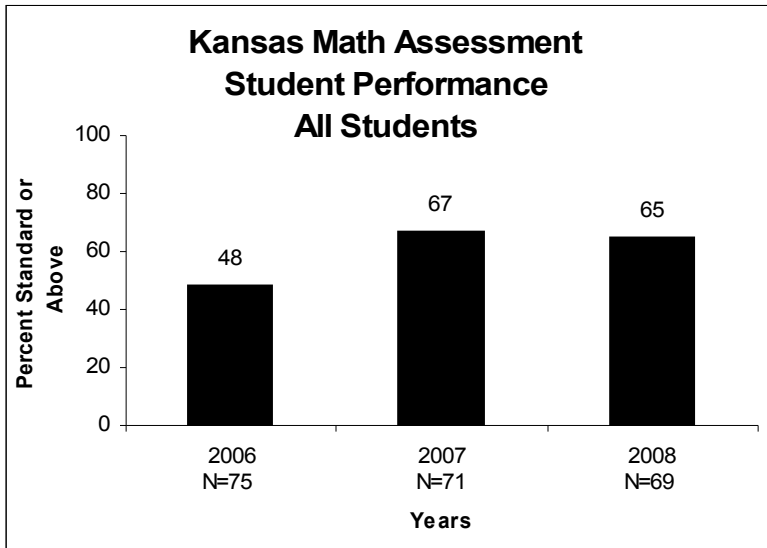
### Percent Correct

The Mathematics assessment has four parts, Number and Computation, Geometry, Algebra, and Data. Since our school improvement plan focuses on data, we also displayed the percent correct of the Data subtest.

We combined scores from both the General and the KAMM Assessments in this report. Alternate Assessment scores are not included in the Data subtest graphs. Since a new state assessment was developed for 2006, previous year's data cannot be compared.

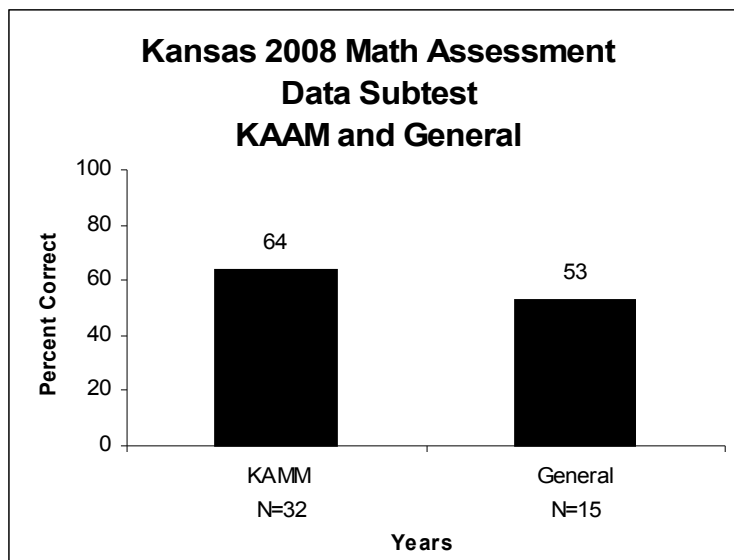
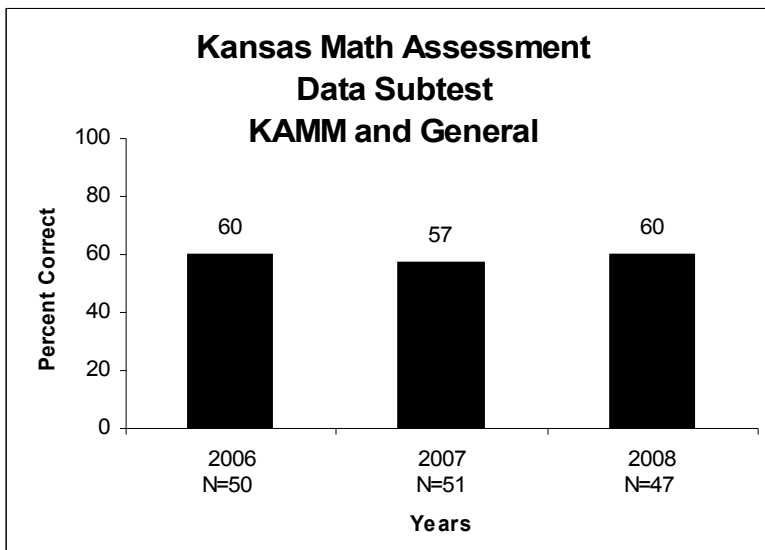
## Kansas State Mathematics Assessment 2008 Results

The following graphs show the percentage of students who were classified as Standard or above on the 2008 State Math assessment. The data includes students who were classified as Standard, Exceeds Standard, and Exemplary. These graphs include all three assessments, General, KAMM, and Alternate.



# Kansas State Mathematics Assessment 2008 Results

The following graphs show the average score of the **data indicators** in the 2008 State Math assessment. For the purpose of this report, we graphed the average percent score for the KAMM and General assessments. This data is not available for students taking the Alternate assessment.

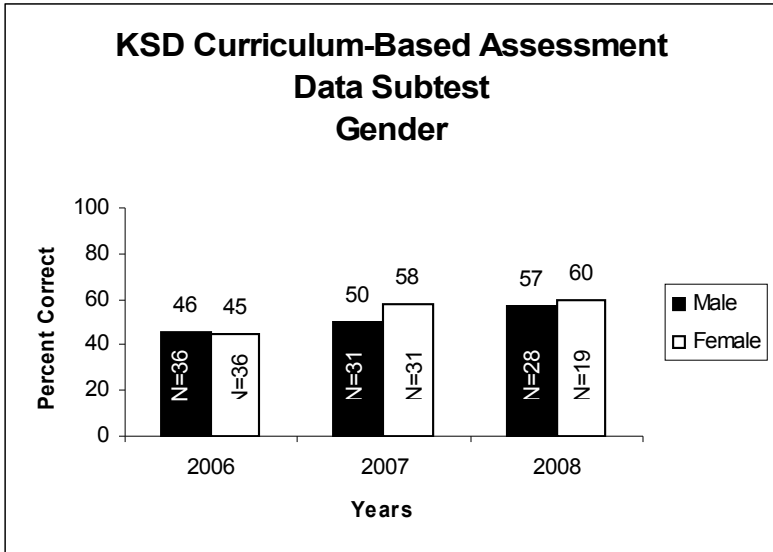
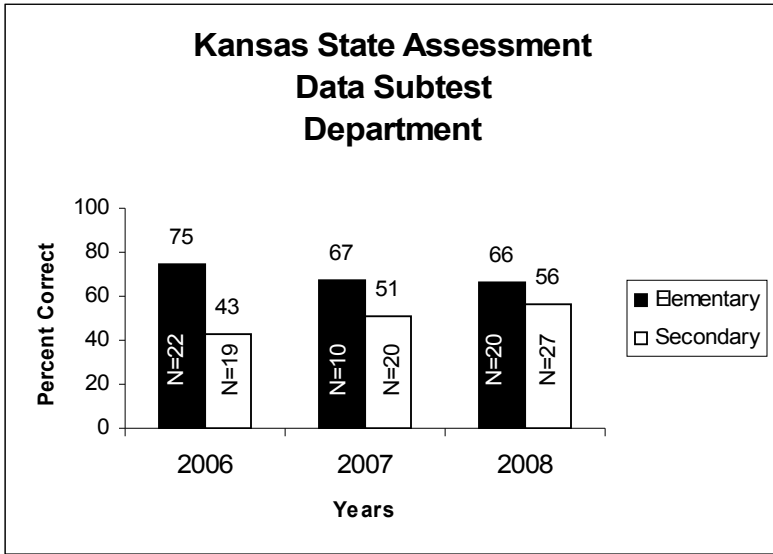


# Kansas State Mathematics Assessment

## 2008 Results

### Disaggregation

These graphs represent the combined KAMM and General Assessment scores disaggregated by *Department* and *Gender*.

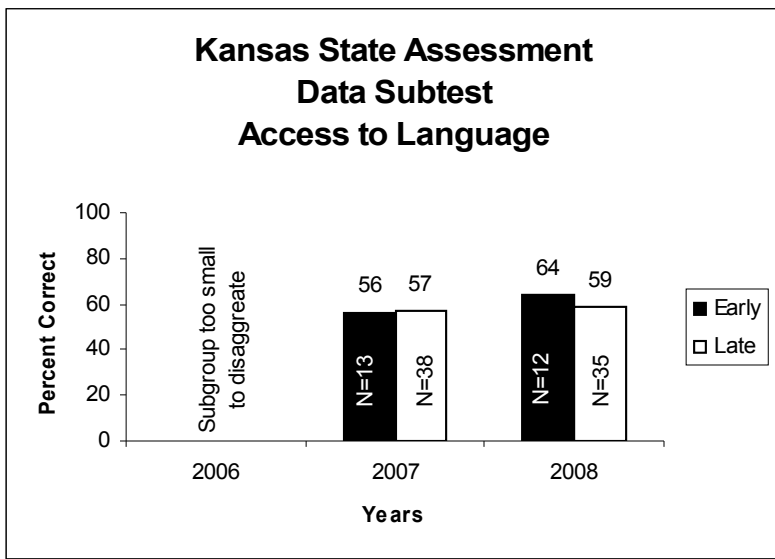
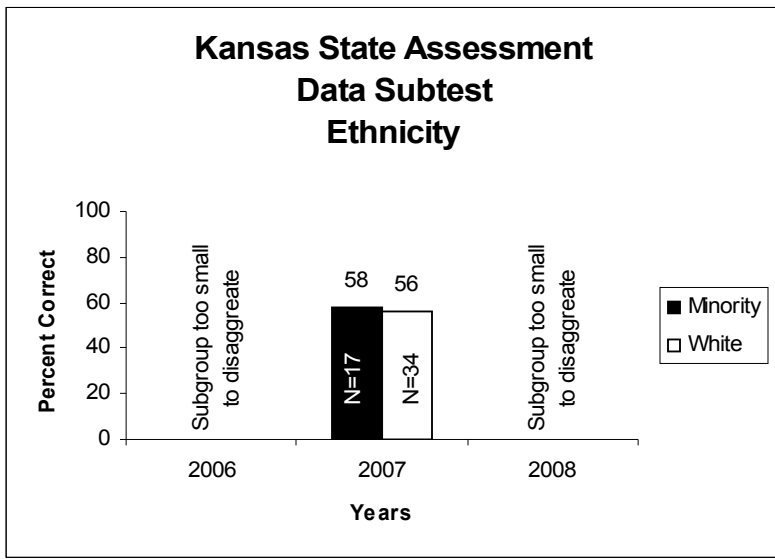


# Kansas State Mathematics Assessment

## 2008 Results

### Disaggregation

These graphs represent the combined 2007 KAMM and General Assessment scores disaggregated by *Ethnicity* and *Early Access to Language*. A student was considered to have early access to language if one or more of their parents were deaf or fluent in sign language at the time of their birth.



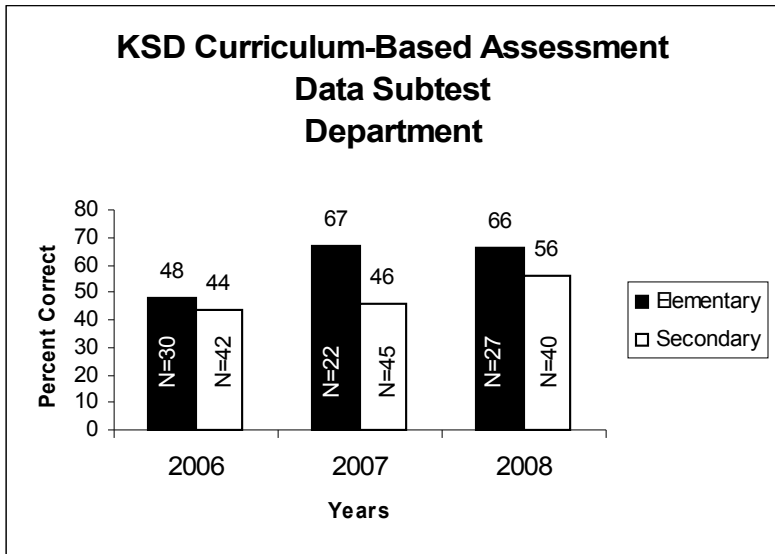
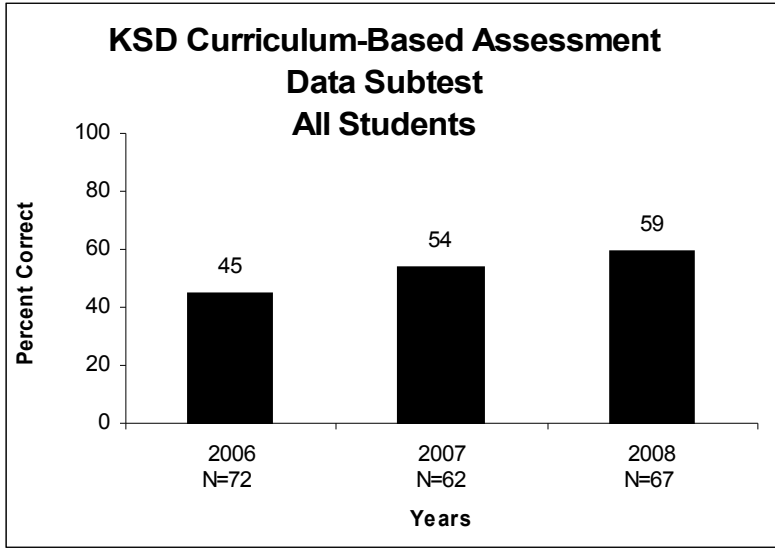
## **KSD Curriculum-Based Assessment**

### **General Information**

The Kansas State School for the Deaf has developed a local, curriculum-based mathematics assessment based on the 2004 Kansas Math Standards. The KSD assessment is aligned with the standards and measures all four content areas, Number and Computation, Algebra, Geometry, and Data. The assessment is given to all students in grades 1 through 12 in the spring of the year. Students working off the Extended Standards are not given the assessment.

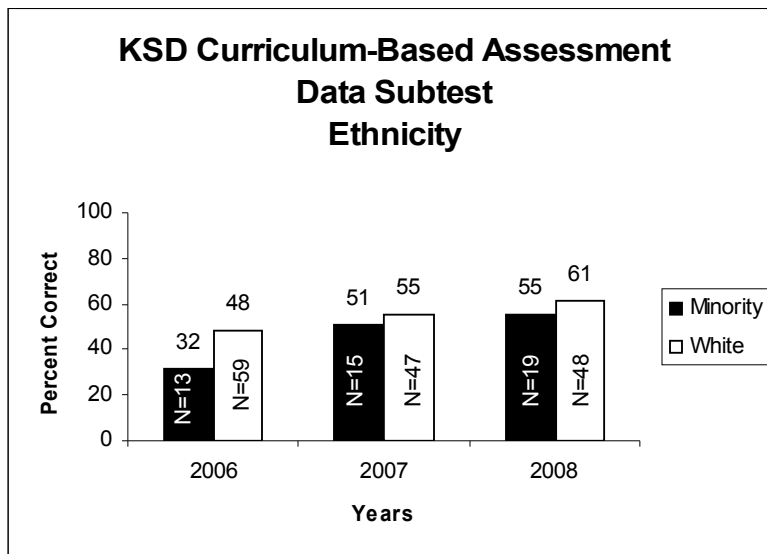
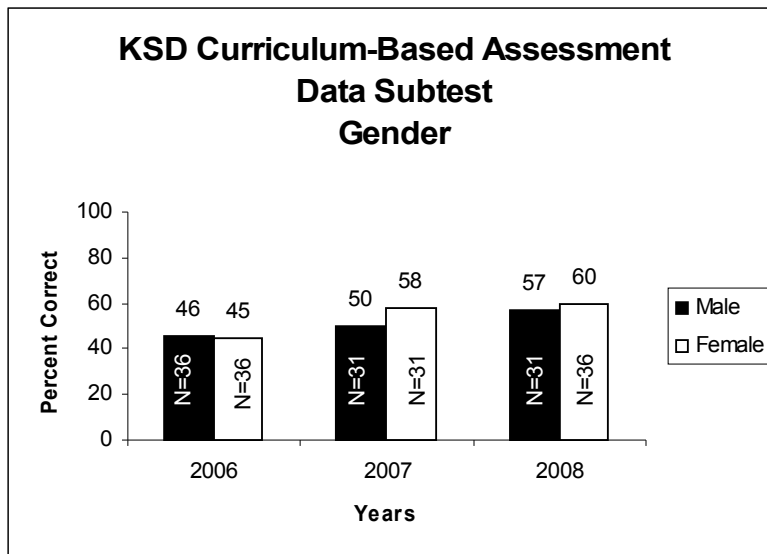
For the purpose of this report, scores are reported for the Data content area only. Scores are displayed by mean percent correct. Data is disaggregated by Department, Ethnicity, Gender, and Early Access to Language. A student was considered to have early access to language if one or more of their parents were deaf or fluent in sign language at the time of their birth.

# KSD Curriculum-Based Assessment 2008 Results



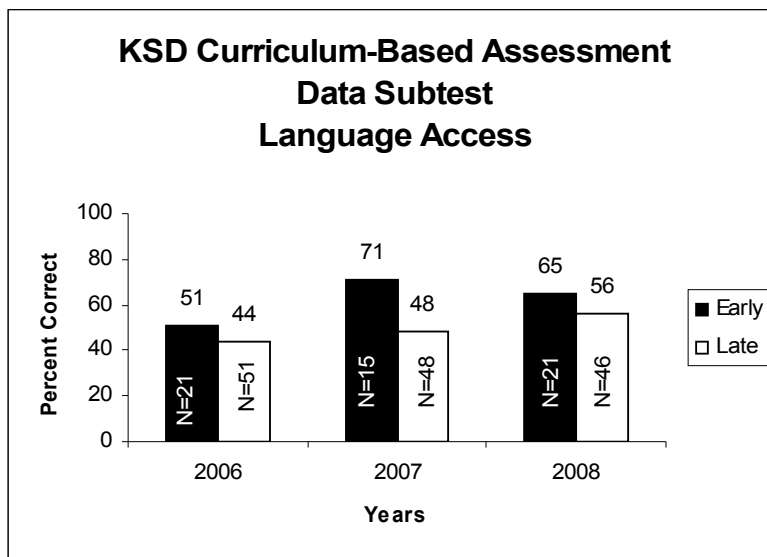
## KSD Curriculum-Based Assessment 2008 Results

The KSD Curriculum-Based assessment data was disaggregated for three different variables, by *gender*, by *race/ethnicity*, and by *early access to language*. A student was considered to have early access to language if one or more of their parents were deaf or fluent in sign language at the time of their birth.



## KSD Curriculum-Based Assessment 2008 Results

The KSD Curriculum-Based assessment data was disaggregated for three different variables, by *gender*, by *race/ethnicity*, and by *early access to language*. A student was considered to have early access to language if one or more of their parents were deaf or fluent in sign language at the time of their birth.



# Measures of Academic Progress (MAP) Assessment

## General Information

The Measures of Academic Progress (MAP) are state-aligned computerized adaptive tests that reflect the instructional level of each student and measures growth over time. The MAP assessment was developed by the Northwest Education Association (NWEA).

The MAP test provides results that can be used to:

- Monitor academic growth over time
- Make data-driven decisions at the classroom and school level.
- Place new students into appropriate instructional programs.

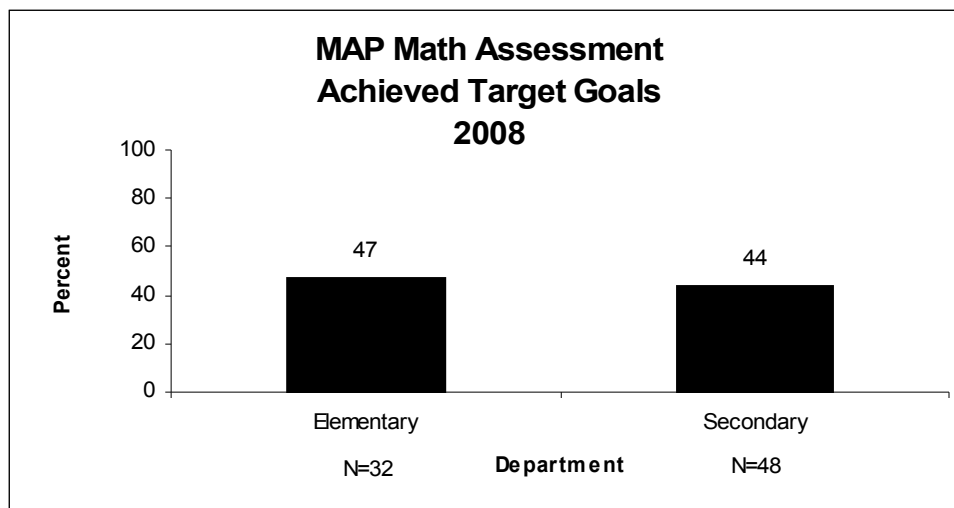
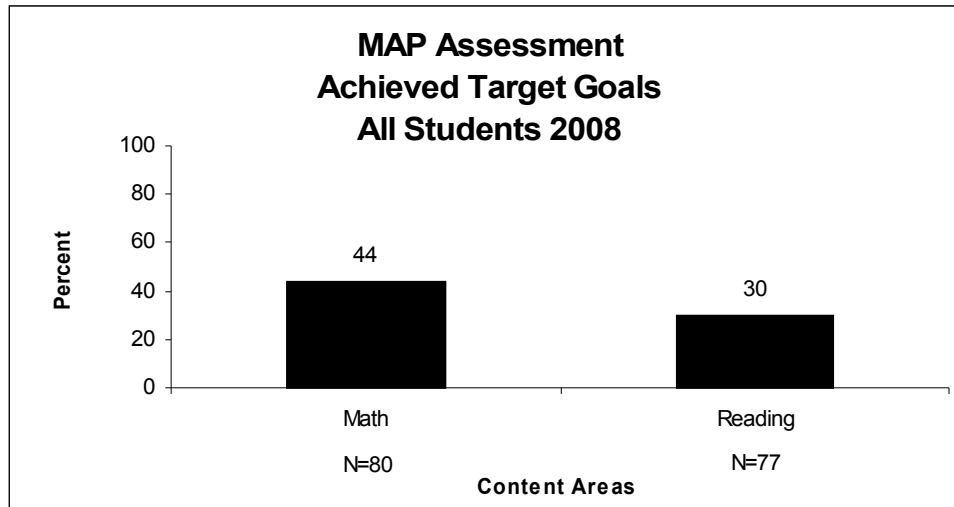
The assessment itself is unique in that it adapts to the student's ability, accurately measuring what a child know and needs to learn. In addition, MAP tests measure academic growth over time, independent of grade level or age.

Map scores are reported in RITs or Rasch units. The RIT scale is an equal interval achievement scale that starts at 150 and goes to 300. The RIT scale allows educators to monitor growth accurately much like a ruler measures physical growth. The student's RIT score is the place on the scale where they can answer questions with 50% accuracy. The RIT scale is not grade level dependent. Any student at any grade level can attain any RIT score.

In 2005, a large group of students nationally were given the MAP Assessment to develop grade level norms from 2<sup>nd</sup> through 10<sup>th</sup> grades. The norm RIT scores are provided by NWEA and give a median score and average growth (Fall to Spring) for each grade level 2<sup>nd</sup> through 10<sup>th</sup>.

We graphed the data to compare the growth of our students from Fall to Spring with the growth of the norm group. We represented this growth on the graphs as a percentage of students who achieved the norm growth.

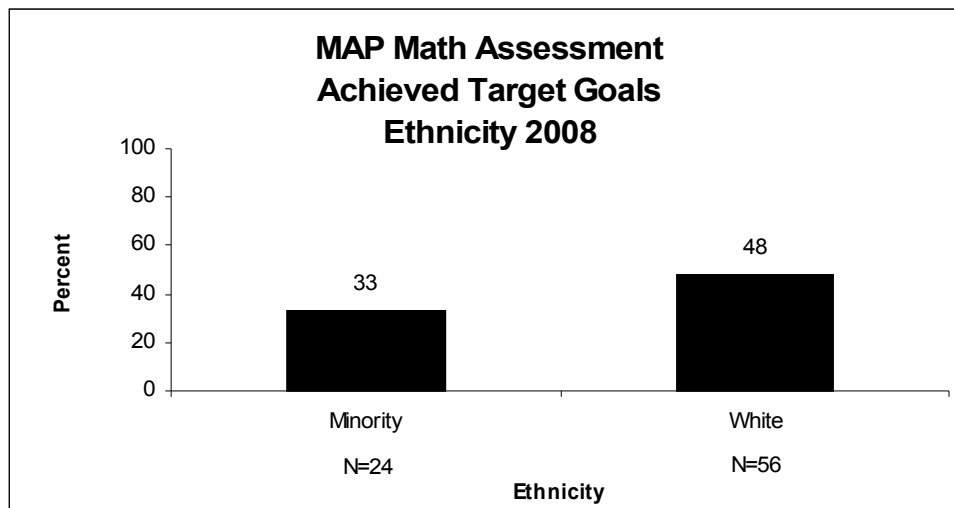
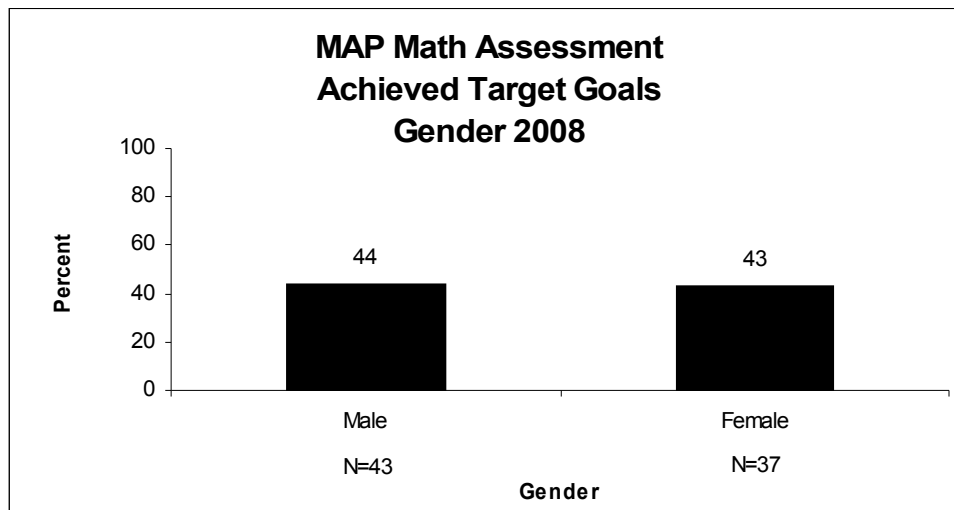
## Measures of Academic Progress (MAP) Assessment 2008 Results



The data indicates that in Mathematics 44% of our students achieved at or above the norm growth from Fall 2007 to Spring 2008. In Reading 30% of our students achieved at or above the norm growth.

## Measures of Academic Progress (MAP) Assessment 2008 Results

The MAP assessment data was disaggregated for three different variables, by *gender*, by *race/ethnicity*, and by *early access to language*. A student was considered to have early access to language if one or more of their parents were deaf or fluent in sign language at the time of their birth.



## Measures of Academic Progress (MAP) Assessment 2008 Results

The MAP assessment data was disaggregated for three different variables, by *gender*, by *race/ethnicity*, and by *early access to language*. A student was considered to have early access to language if one or more of their parents were deaf or fluent in sign language at the time of their birth.

