

IMPLEMENTATION & RESULTS

**B A I L E Y**  
**MIDDLE SCHOOL**

*Research Study*

# ACKNOWLEDGMENTS

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This study was developed through the combined work of several individuals.

We are particularly indebted to Bailey Middle School for implementing the Reading Horizons program and agreeing to collect and share student outcome data. Without their willingness and efforts, this study would not have been possible.

The RISE Institute for Literacy provided valuable insights throughout the compilation of the research.

Additionally, we would like to recognize the contribution of Holly A. Hyte, a representative of the independent educational research firm Clear Insight for guidance in the tasks of data analysis and interpretation of outcomes. We would also like to recognize the Reading Horizons representatives who supported the data collection efforts and who worked to extend product use to communities that will benefit from the systematic Reading Horizons approach.

# TABLE OF CONTENTS

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Bailey Middle School.....	4
Grade 6.....	9
Grade 7.....	14
Grade 8.....	19

# BAILEY MIDDLE SCHOOL

## TYPE OF STUDY

*Pre-/Post-*

## TYPE OF SCHOOL

*Public*

## POPULATION OF STUDENTS

*Struggling readers within a general education population; some students (23%) were deemed eligible for special education instruction prior to the start of the program*

## GRADE LEVEL

*Middle school, grades 6-8*

## LENGTH OF DATA COLLECTION

*1 school year*

## LOCATION

*Southern United States,  
West South Central Region*

## POPULATION OF CITY

*11,320 people*

## SOCIO-ECONOMIC STATUS

*63% of total enrollment qualified for free or reduced lunch*

## NUMBER OF SCHOOLS

*1 school*

## NUMBER OF STUDENTS

*185 students*

## READING HORIZONS MATERIALS

*Reading Horizons Software and  
Direct Instruction Materials*

## ASSESSMENT TOOLS

*Measures of Academic Progress (MAP®); AIMSweb® MAZE*

## Summary of Findings

*Following Reading Horizons instruction, underperforming middle school students improved reading skills as measured by nationally normed tests.*

## Background

A middle school resource teacher implemented the Reading Horizons program with 185 students. Pre- and post-test scores for all of the students were gathered before and after the students had used the Reading Horizons interactive software.

## Resources

Reading Horizons software and direct instruction materials, multiple assessments, and a teacher trained in the Reading Horizons method.

## Implementation

Bailey Middle School used multiple assessments, such as KPREP, Discovery Education, and MAP, to identify at-risk students. It began using Reading Horizons as an intervention for 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grade students in the bottom 10<sup>th</sup> percentile. The students used the program daily and stayed in the program until they tested above the 10<sup>th</sup> percentile or tested out of the program.

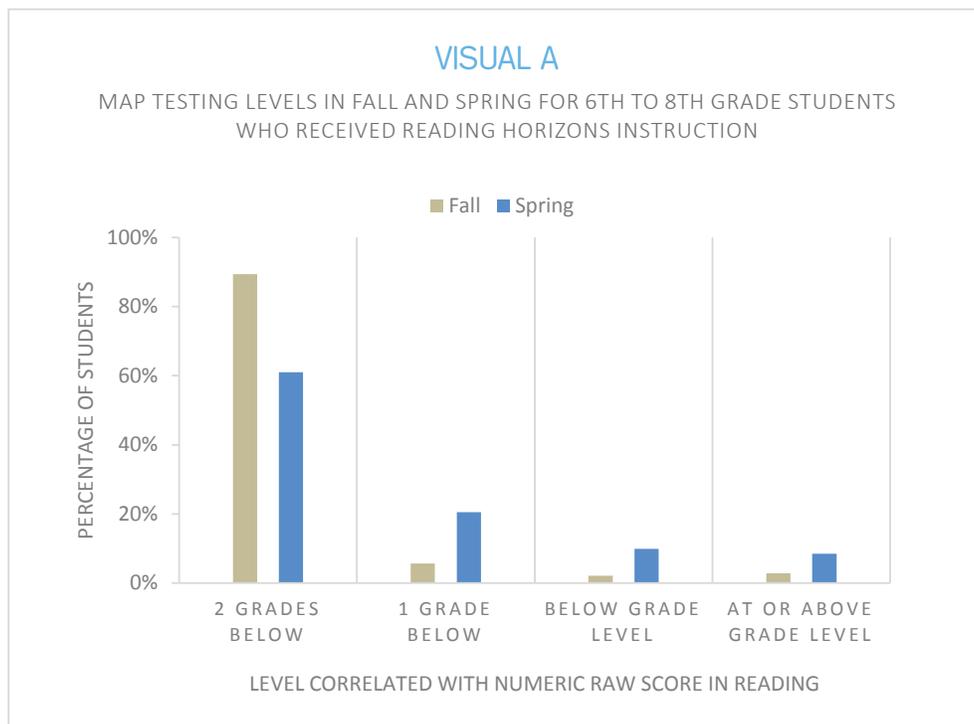
Outcome data was recorded for 185 students who received Reading Horizons instruction during their 6<sup>th</sup>, 7<sup>th</sup>, or 8<sup>th</sup> grade school year. MAP and AIMSweb MAZE tests were administered at the start (fall), middle (winter), and end (spring) of the school year. Some students moved during the study and others had data missing. MAP scores for all three data points were reported for 141 of the students. Complete AIMSweb MAZE data was reported for 157 of the students.

Outcomes

**Measures of Academic Progress (MAP) Testing**

**Assessment Description:** Numeric scores are categorized into levels drawn from national normative data: above grade level, at grade level, and below grade level. Below grade level data is broken into 3 sub-categories: Below, 1 grade below, and 2 grades below. The benchmark changes during the school year, so students who demonstrate no change in their numeric scores from the start to the end of the school year may end at a lower level than the one in which they started.

- For the 141 students with complete MAP data, the average group gain from fall to spring was 10.4 points.
- 84.4% of students demonstrated a gain in their fall to spring scores; 17.6% of this subgroup were deemed eligible for special education services prior to the beginning the program.
- Of the 14.2% of students whose scores declined from fall to spring, 40% were categorized as needing special education services prior to the start of the program.
- Initial scores for 89.4% of students fell within the lowest category (2 grades below). After a year of Reading Horizons instruction, 28.4% of that group had spring scores that fell within a higher level (Visual A).



- 34% of the students (48) had a spring score at a higher level than their fall score. Of those students, 58.3% gained one level, 20.8% of students' scores increased by two levels, 12.5% of students increased their scores three levels, and 8.3% of this subgroup gained four levels by the end of the year.
- Twenty-two students gained a level at mid-year testing (fall to winter); however, when the benchmark increased again at the end of the year, six of them were unable to retain the level gained, and they finished the year in the same level in which they began.

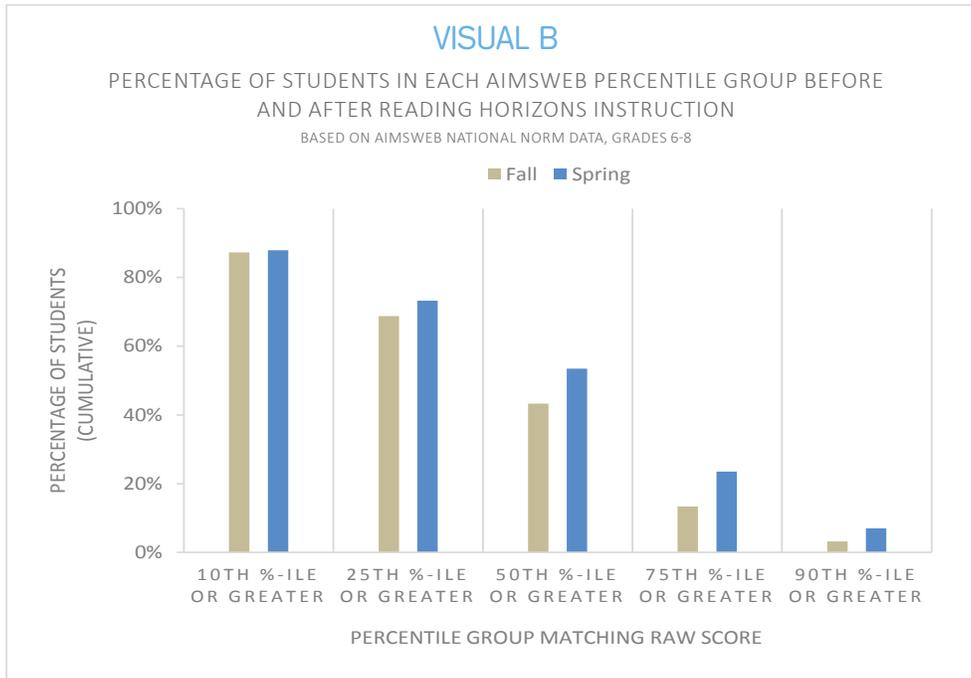
### **AIMSweb MAZE Assessment in Reading**

**Assessment Description:** The AIMSweb MAZE assessment, although affiliated with a curriculum publisher, is not program-specific; it is a valid and reliable tool for assessing students regardless of the instructional program implemented. AIMSweb MAZE is a test of reading comprehension. National and aggregate norms are available for each school year, the national norms being slightly higher than the aggregate.

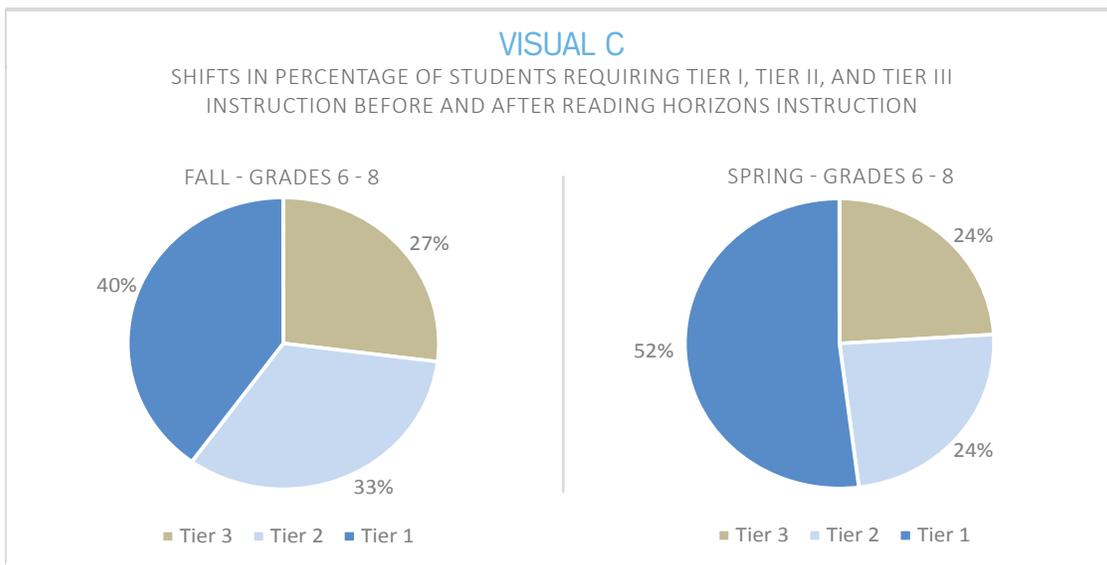
*This class's data were compared to national norms for the same year in which the program was implemented. Student raw scores can be compared to norm scores at the 10<sup>th</sup>, 25<sup>th</sup>, 75<sup>th</sup>, 90<sup>th</sup>, and 91<sup>st</sup> percentiles.*

*In addition, the publisher provides data on Rate of Improvement (ROI), by which students' increase or decrease in reading comprehension skills can be compared to students with similar fall scores. ROI data is provided by percentile for each of 5 groups: Very Low (students with fall scores at or below the 10<sup>th</sup> percentile); Low (fall scores in the 11<sup>th</sup>-25<sup>th</sup> percentile); Average (26<sup>th</sup>-75<sup>th</sup> percentile); High (76<sup>th</sup>-90<sup>th</sup> percentile); and Very High (91<sup>st</sup> percentile and above). Additionally, cut-off scores that correlate with tiers of instruction yield information regarding the intensity of instruction that will likely produce the most benefit for students.*

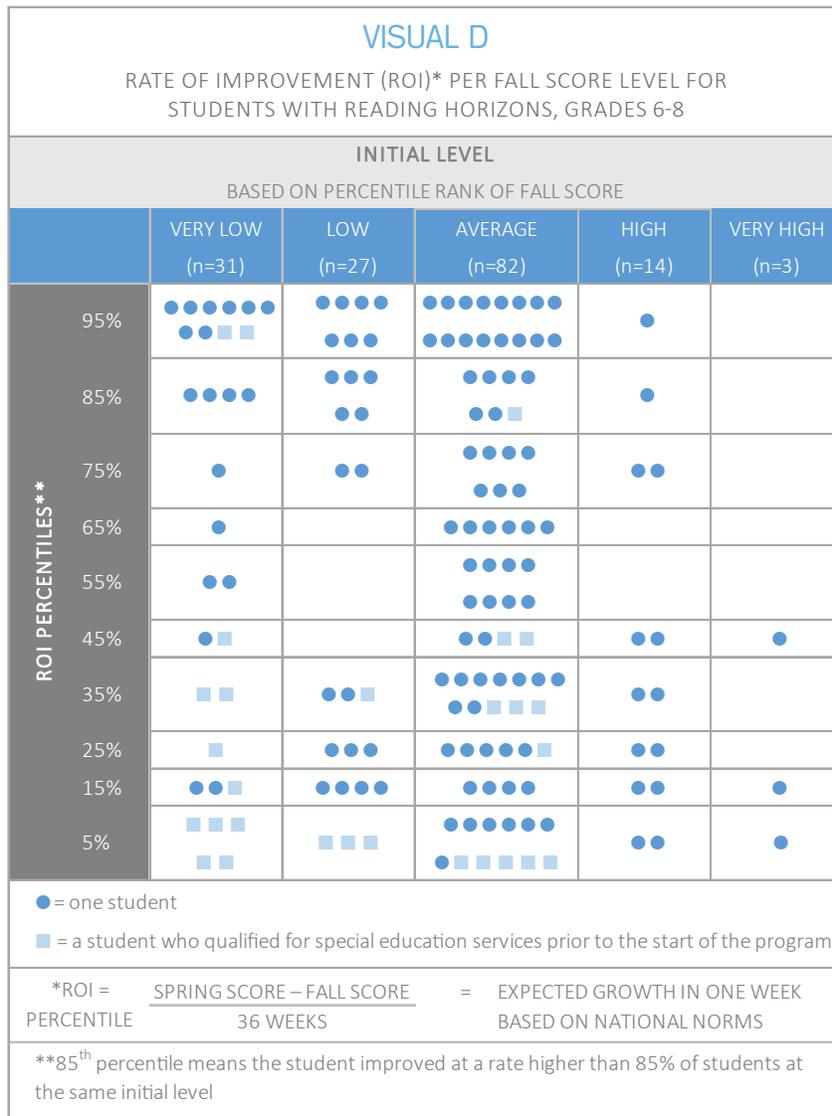
- 78% of students increased their AIMSweb MAZE scores from fall to spring; 13% of this subgroup were deemed eligible for special education services prior to beginning the program.
- Scores for 3% of students remained the same.
- Spring scores for 19% of students decreased compared to their fall scores; 37% of this subgroup were deemed eligible for special education services prior to the start of the program.



- Students whose initial scores indicated they would benefit from or require intensive instruction (Tier III) decreased to less than a quarter of the participants by the end of the study (Visual C).
- Students whose initial scores indicated they would benefit from or require strategic instruction (Tier II) also decreased to less than a quarter of participants by the end of the study (Visual C).
- Students whose initial scores indicated they would benefit from baseline instruction (Tier I) increased from 40% to 52%; by the end of the year, more than half of the participants were reading at a level correlated with success in Tier I instruction (Visual C).



- Eighty students (51%) progressed at an average rate or better compared to the national norms of students in their same initial level (as determined by fall scores) (Visual D).  
*NOTE: Initial level is determined by fall score (Very Low=initial score within the 10<sup>th</sup> percentile and below; Low= 11<sup>th</sup>-25<sup>th</sup> percentile; Average= 26<sup>th</sup>-75<sup>th</sup> percentile; High=76<sup>st</sup>-90<sup>th</sup> percentile; Very High=91<sup>st</sup> percentile and above).*
- The reading skills of 46 students (29%) improved at rates that correlate with closing the achievement gap (between the 50<sup>th</sup> and 85<sup>th</sup> percentile) (Visual D).
- Thirty-four students (22%) demonstrated rates of improvement at the 95<sup>th</sup> percentile, which means that during one school year, their reading scores improved at rates that only the top 5% of students achieved; students with this ROI are known as the “Ambitious” group (>85<sup>th</sup> percentile) (Visual D).
- Of the 49% of students who progressed at a below average rate, about a third of them (32.4%) qualified for special education services, and based on individual need, may have had an expected rate of progress differing from the trend of the national norm data (Visual D).



# GRADE 6

## TYPE OF STUDY

*Pre-/Post-*

## TYPE OF SCHOOL

*Public*

## POPULATION OF STUDENTS

*Struggling readers within a general education population; some students (23%) were deemed eligible for special education instruction prior to the start of the program*

## GRADE LEVEL

*Grade 6*

## LENGTH OF DATA COLLECTION

*1 school year*

## LOCATION

*Southern United States,  
West South Central Region*

## POPULATION OF CITY

*11,320 people*

## SOCIO-ECONOMIC STATUS

*63% of total enrollment qualified for free or reduced lunch*

## NUMBER OF SCHOOLS

*1 school*

## NUMBER OF STUDENTS

*52 students*

## READING HORIZONS MATERIALS

*Reading Horizons Software and  
Direct Instruction Materials*

## ASSESSMENT TOOLS

*Measures of Academic Progress (MAP); AIMSweb MAZE*

## Summary of Findings

*Refer to page 4.*

## Background

A middle school resource teacher implemented the Reading Horizons program with 52 6<sup>th</sup> students. Pre- and post-test scores for all of the students were gathered before and after the students had used the Reading Horizons interactive software.

## Resources

Reading Horizons software and direct instruction materials, multiple assessments, and a teacher trained in the Reading Horizons method.

## Implementation

Bailey Middle School used multiple assessments, such as KPREP, Discovery Education and MAP, to identify at-risk students. It began using Reading Horizons as an intervention for 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grade students in the bottom 10<sup>th</sup> percentile. The students used the program daily and stayed in the program until they tested above the 10<sup>th</sup> percentile or tested out of the program.

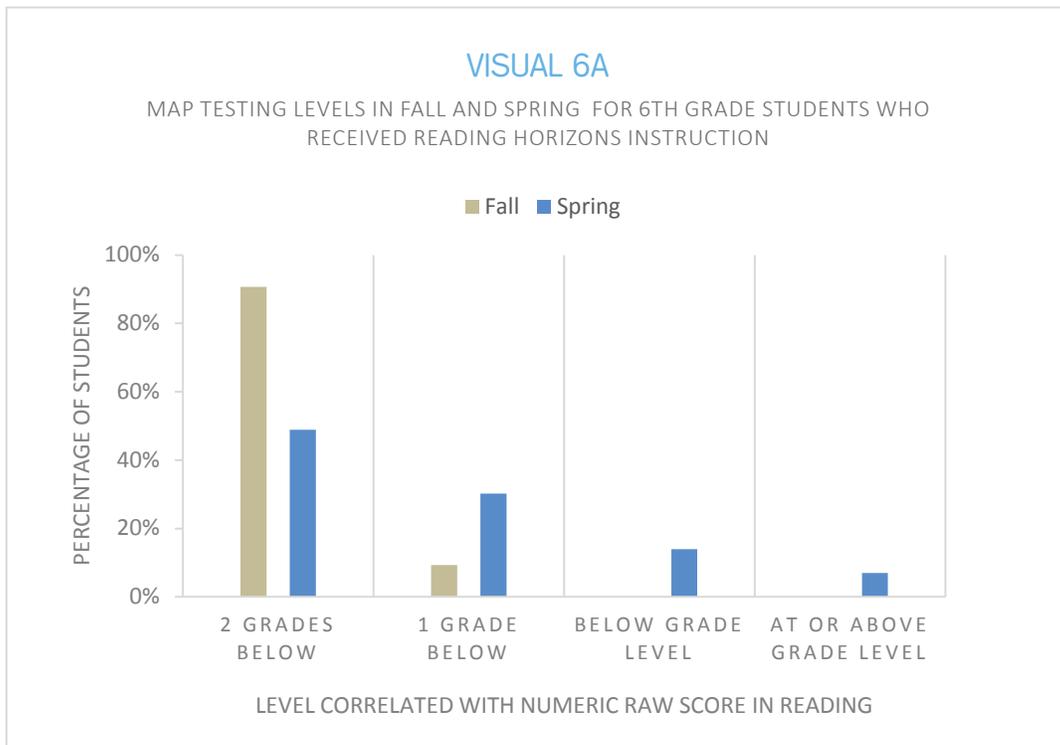
Outcome data was recorded for 48 students who received Reading Horizons instruction during their 6<sup>th</sup> grade school year. MAP and AIMSweb MAZE tests were administered at the start (fall), middle (winter), and end (spring) of the school year. Some students moved during the study and others had data missing. MAP scores for all three data points were reported for 43 of the students. Complete AIMSweb MAZE data was reported for 45 of the students.

Outcomes

**Measures of Academic Progress (MAP) Testing**

**Assessment Description:** Numeric scores are categorized into levels drawn from national normative data: above grade level, at grade level, and below grade level. Below grade level data is broken into 3 sub-categories: Below, 1 grade below, and 2 grades below. The benchmark changes during the school year, so students who demonstrate no change in their numeric scores from the start to the end of the school year may end at a lower level than the one in which they started.

- For the 43 students with complete MAP data, the average group gain from fall to spring was 14.1 points.
- 95% of students demonstrated a gain in their fall to spring scores; 19.5% of this subgroup were deemed eligible for special education services prior to the beginning of the program.
- Of the 5% of students whose scores declined from fall to spring, 100% were categorized as needing special education services prior to the start of the program.
- Initial scores for 91% of students fell within the lowest category (2 grades below). After a year of Reading Horizons instruction, 42% of that group had spring scores that fell within a higher level; therefore, the decrease in the number of students in the lowest category approached almost one-half (Visual 6A).
- At the time of fall testing, no students had a raw score in the top three categories. At spring testing, 21% of students were in one of the top three categories (Visual 6A).



- 47% of 6<sup>th</sup> grade participants had a spring score which fell within a higher level than their fall score. Of those students, 65% gained one level, 20% increased by two levels, and 15% increased three levels.
- Seven students gained a level at mid-year testing (fall to winter); however, when the benchmark increased again at the end of the year, one student was unable to retain the level gained and finished the year in the initial level.

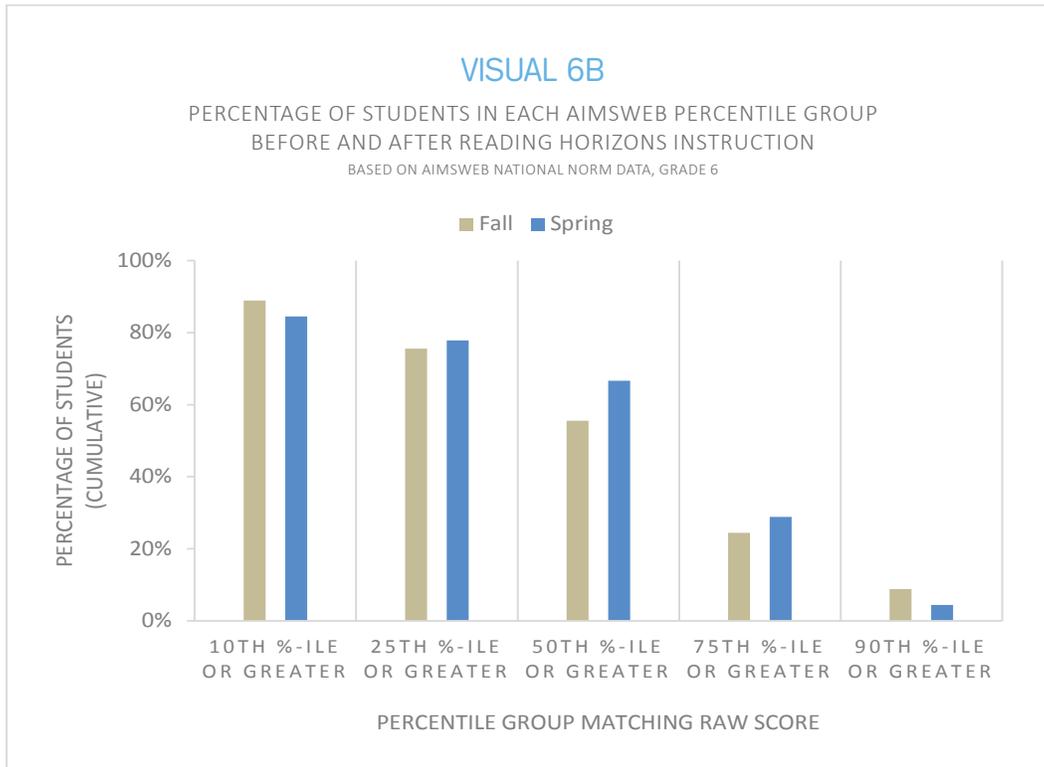
### **AIMSweb MAZE Assessment in Reading**

**Assessment Description:** *The AIMSweb MAZE assessment, although affiliated with a curriculum publisher, is not program-specific; it is a valid and reliable tool for assessing students regardless of the instructional program implemented. AIMSweb MAZE is a test of reading comprehension. National and aggregate norms are available for each school year, the national norms being slightly higher than the aggregate.*

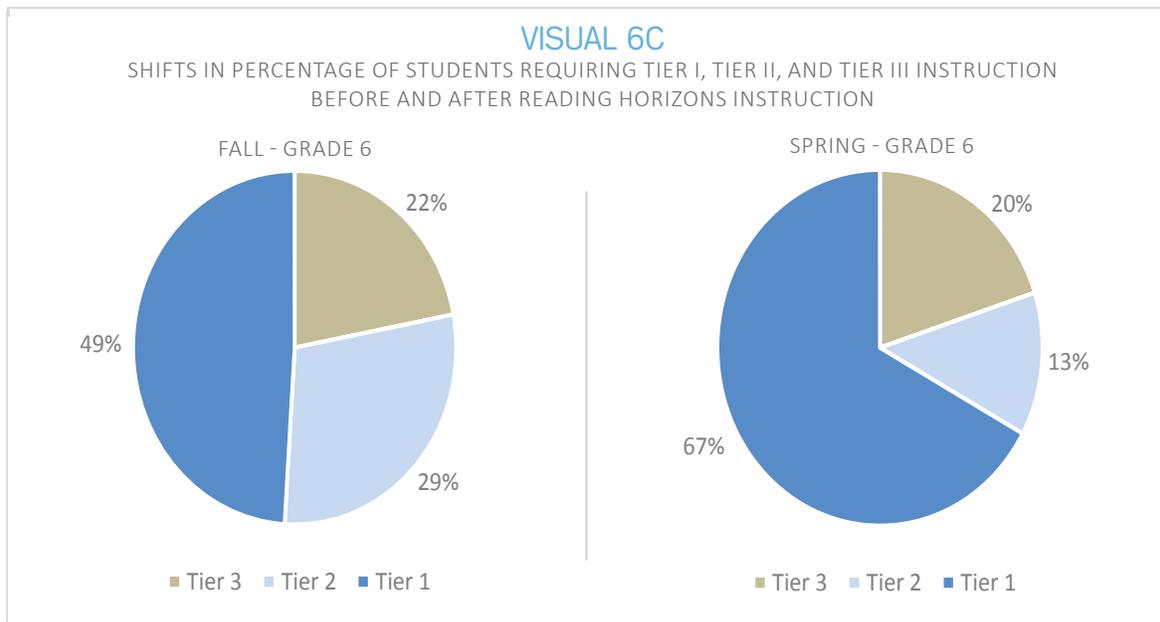
*This class's data were compared to national norms for the same year in which the program was implemented. Student raw scores can be compared to norm scores at the 10<sup>th</sup>, 25<sup>th</sup>, 75<sup>th</sup>, 90<sup>th</sup>, and 91<sup>st</sup> percentiles.*

*In addition, the publisher provides data on Rate of Improvement (ROI), by which students' increase or decrease in reading comprehension skills can be compared to students with similar fall scores. ROI data is provided by percentile for each of 5 groups: Very Low (students with fall scores at or below the 10<sup>th</sup> percentile); Low (fall scores in the 11<sup>th</sup>-25<sup>th</sup> percentile); Average (26<sup>th</sup>-75<sup>th</sup> percentile); High (76<sup>th</sup>-90<sup>th</sup> percentile); and Very High (91<sup>st</sup> percentile and above). Additionally, cut-off scores that correlate with tiers of instruction yield information regarding the intensity of instruction that will likely produce the most benefit for students.*

- The following scores are the average AIMSweb scores for 6<sup>th</sup> grade participants: fall–20.76; winter –24.56; spring–26.96. The average gain in AIMSweb scores from fall to spring was 6.2 points.
- 76% of students increased their AIMSweb MAZE scores from fall to spring; 9% of this subgroup were deemed eligible for special education services prior to the start of the program.
- Spring scores for 24% of students decreased compared to their fall scores; 55% of this subgroup were deemed eligible for special education services prior to the start of the program.
- Compared to fall scores, students' spring scores correlated with higher percentile rankings (Visual 6B).



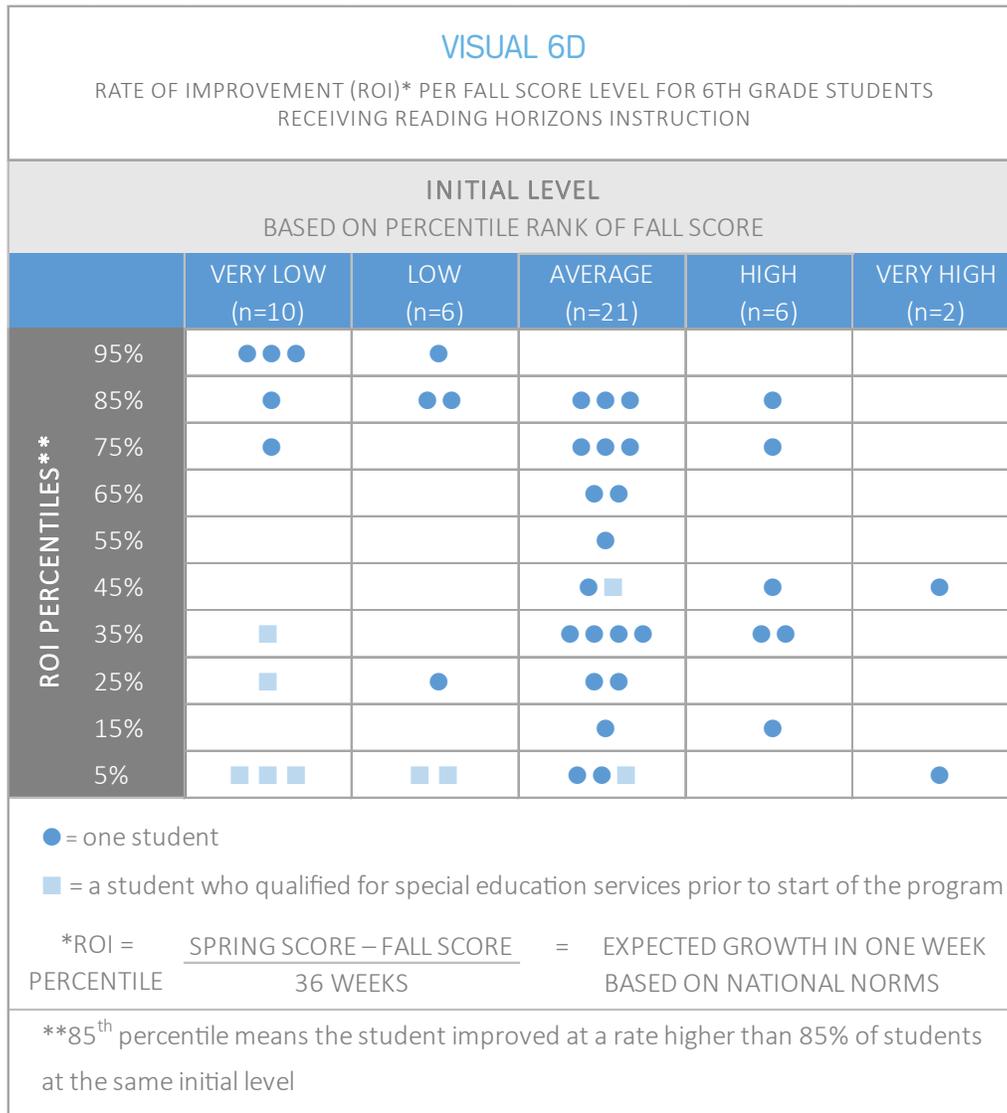
- Students whose initial scores indicated they would benefit from or require intensive instruction (Tier III) or strategic instruction (Tier II) decreased from fall to spring (Visual 6C).
- The percentage of students whose initial scores indicated they would benefit from baseline instruction (Tier I) increased from fall to spring by 18% (Visual 6C).



- 42% of students progressed at average or better rates compared to national norms for students in their same initial level (as determined by fall score) (Visual 6D).

**NOTE:** Initial level is determined by fall score (Very Low=initial score within 10<sup>th</sup> percentile and below; Low=11<sup>th</sup>-25<sup>th</sup> percentile; Average=26<sup>th</sup>-75<sup>th</sup> percentile; High=76<sup>th</sup>-90<sup>th</sup> percentile; Very High=91<sup>st</sup> percentile and above).

- Fifteen students' ROI scores indicated that they closed the gap (between the 50<sup>th</sup> and 85<sup>th</sup> percentile) (Visual 6D).
- Four students demonstrated ROI scores (>85<sup>th</sup> percentile) that placed them in the "Ambitious" group (Visual 6D).
- Of the 58% of students who progressed at a below average rate, slightly more than one third of them (35%) qualified for special education services, and based on individual need, may have had an expected rate of progress differing from the trend of the national norm data (Visual 6D).



# GRADE 7

## TYPE OF STUDY

*Pre-/Post-*

## TYPE OF SCHOOL

*Public*

## POPULATION OF STUDENTS

*Struggling readers within a general education population; some students (23%) were deemed eligible for special education instruction prior to the start of the program*

## GRADE LEVEL

*Grade 7*

## LENGTH OF DATA COLLECTION

*1 school year*

## LOCATION

*Southern United States,  
West South Central Region*

## POPULATION OF CITY

*11,320 people*

## SOCIO-ECONOMIC STATUS

*63% of total enrollment qualified for free or reduced lunch*

## NUMBER OF SCHOOLS

*1 school*

## NUMBER OF STUDENTS

*69 students*

## READING HORIZONS MATERIALS

*Reading Horizons Software and  
Direct Instruction Materials*

## ASSESSMENT TOOLS

*Measures of Academic Progress  
(MAP); AIMSweb MAZE*

## Summary of Findings

*Refer to page 4.*

## Background

A middle school resource teacher implemented the Reading Horizons program with 69 7<sup>th</sup> students. Pre- and post-test scores for all of the students were gathered before and after the students had used the Reading Horizons interactive software.

## Resources

Reading Horizons software and direct instruction materials, multiple assessments, and a teacher trained in the Reading Horizons method.

## Implementation

Bailey Middle School used multiple assessments, such as KPREP, Discovery Education, and MAP, to identify at-risk students. It began using Reading Horizons as an intervention for 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grade students in the bottom 10<sup>th</sup> percentile. The students used the program daily and stayed in the program until they tested above the 10<sup>th</sup> percentile or tested out of the program.

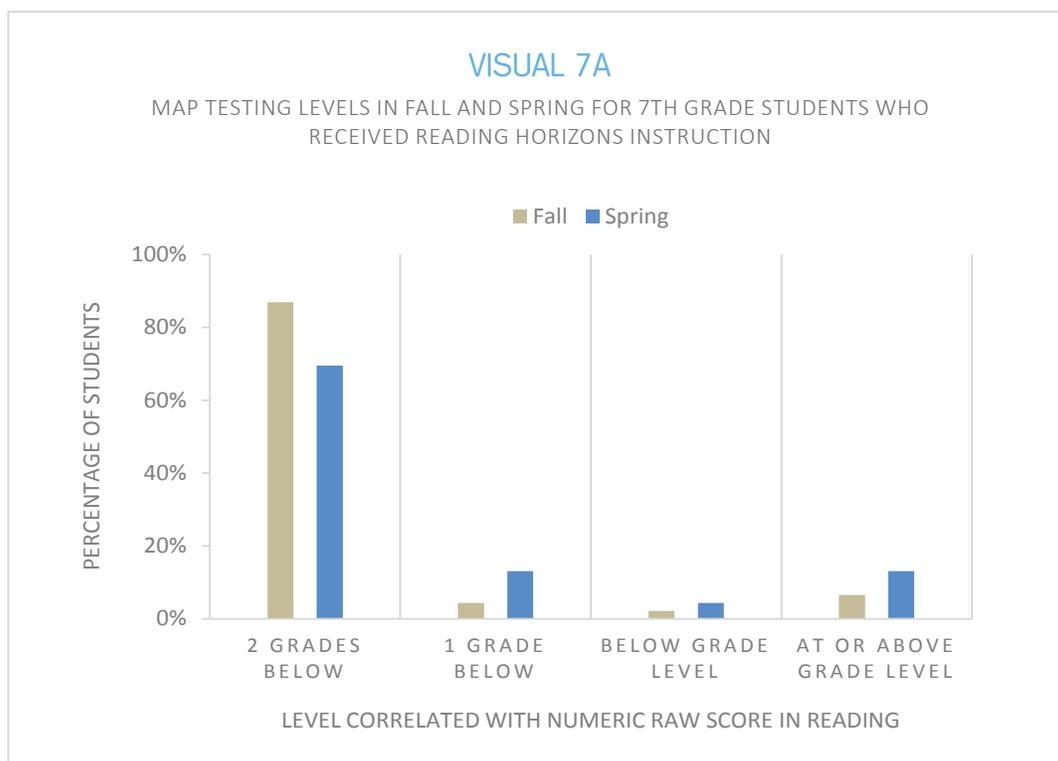
Outcome data was recorded for 62 students who received Reading Horizons instruction during their 7<sup>th</sup> grade school year. MAP and AIMSweb tests were administered at the start (fall), middle (winter), and end (spring) of the school year. Some students moved during the study and others had data missing; therefore, MAP data for all three assessment times was included for 46 of the students. Complete AIMSweb MAZE data was reported for 56 students.

Outcomes

**Measures of Academic Progress (MAP) Testing**

**Assessment Description:** Numeric scores are categorized into levels drawn from national normative data: above grade level, at grade level, and below grade level. Below grade level data is broken into 3 subcategories: Below, 1 grade below, and 2 grades below. The benchmark changes during the school year, so students who demonstrate no change in their numeric scores from the start to the end of the school year may end at a lower level than the one in which they started.

- The group average gain on the MAP scores from fall to spring was 10.4 points.
- 80% of students demonstrated a gain in their fall to spring scores; 13.5% of this group were deemed eligible for special education services prior to the start of the program.
- Scores for 2% of students remained the same fall to spring.
- 17% of students demonstrated a loss in score from fall to spring; 37.5% of this group were deemed eligible for special education services prior to the start of the program.



- Initial scores for 87% of students fell within the lowest category (2 grades below). After a year of Reading Horizons instruction, 17% of that group had spring scores that fell within a higher level.
- 26% of 7<sup>th</sup> grade participants had a spring score that fell within a higher level than their fall score. Of those students, 50% gained one level, 17% of students' scores increased by two levels, 25% of students increased their scores three levels, and 8% of this subgroup's scores increased four levels by the end of the year.
- Nine students gained a level at mid-year testing (fall to winter); however, when the benchmark increased again at the end of the year, four of them were unable to retain the level gained, and they finished the year in the same level in which they began.

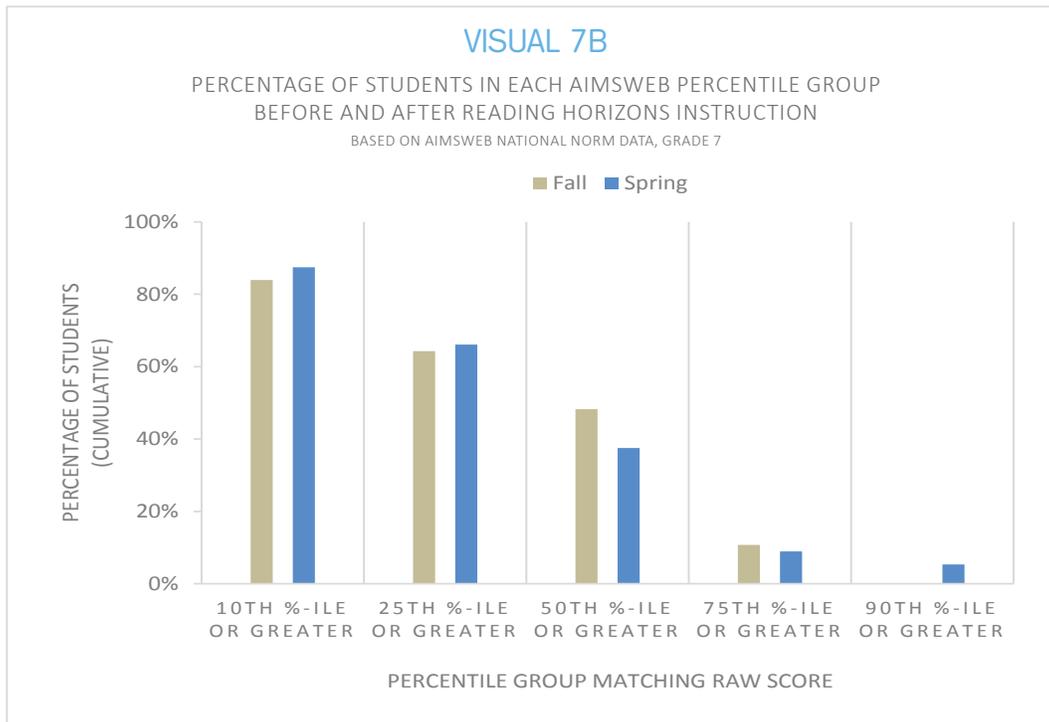
### **AIMSweb MAZE Assessment in Reading**

**Assessment Description:** *The AIMSweb MAZE assessment, although affiliated with a curriculum publisher, is not program-specific; it is a valid and reliable tool for assessing students regardless of the instructional program implemented. AIMSweb MAZE is a test of reading comprehension. National and aggregate norms are available for each school year, the national norms being slightly higher than the aggregate.*

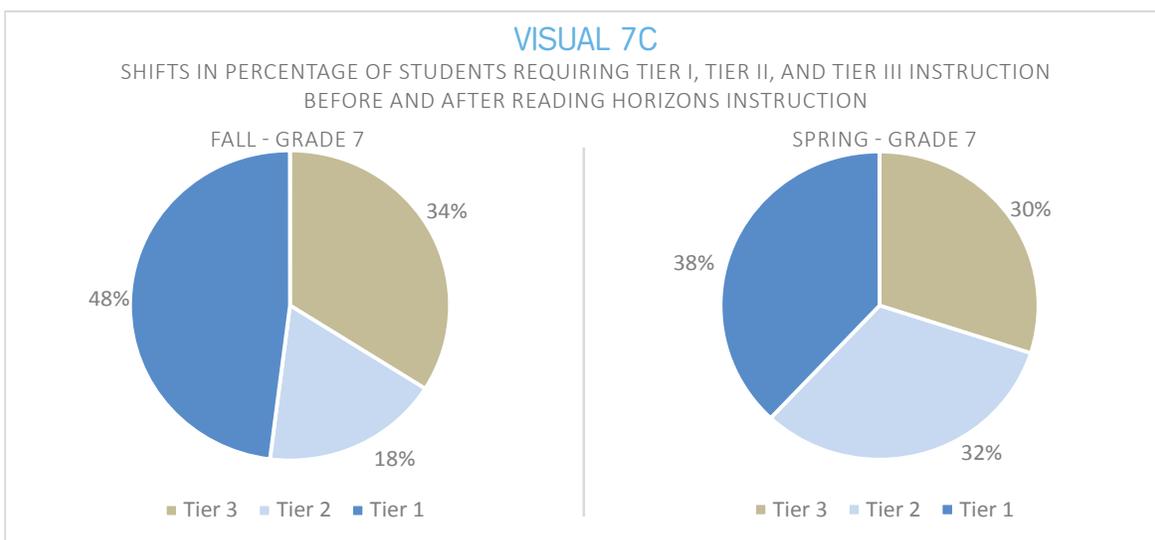
*This class's data were compared to national norms for the same year in which the program was implemented. Student raw scores can be compared to norm scores at the 10<sup>th</sup>, 25<sup>th</sup>, 75<sup>th</sup>, 90<sup>th</sup>, and 91<sup>st</sup> percentiles.*

*In addition, the publisher provides data on Rate of Improvement (ROI), by which students' increase or decrease in reading comprehension skills can be compared to students with similar fall scores. ROI data is provided by percentile for each of 5 groups: Very Low (students with fall scores at or below the 10<sup>th</sup> percentile); Low (fall scores in the 11<sup>th</sup>-25<sup>th</sup> percentile); Average (26<sup>th</sup>-75<sup>th</sup> percentile); High (76<sup>th</sup>-90<sup>th</sup> percentile); and Very High (91<sup>st</sup> percentile and above). Additionally, cut-off scores that correlate with tiers of instruction yield information regarding the intensity of instruction that will likely produce the most benefit for students.*

- The following scores are the average AIMSweb MAZE scores for 7<sup>th</sup> grade participants: fall—19.66; winter—22.29; spring—24.93. The average gain in AIMSweb scores from fall to spring was 5.3 points.
- 71% of students increased their AIMSweb MAZE scores from fall to spring; 7.5% of this subgroup were deemed eligible for special education services prior to the start of the program.
- Scores for 4% of students remained the same.
- Spring scores for 25% of students decreased compared to their Fall scores; 36% of this subgroup were deemed eligible for special education services prior to the start of the program.
- Compared to fall scores, students' spring scores correlated with higher percentile rankings (Visual 7B).



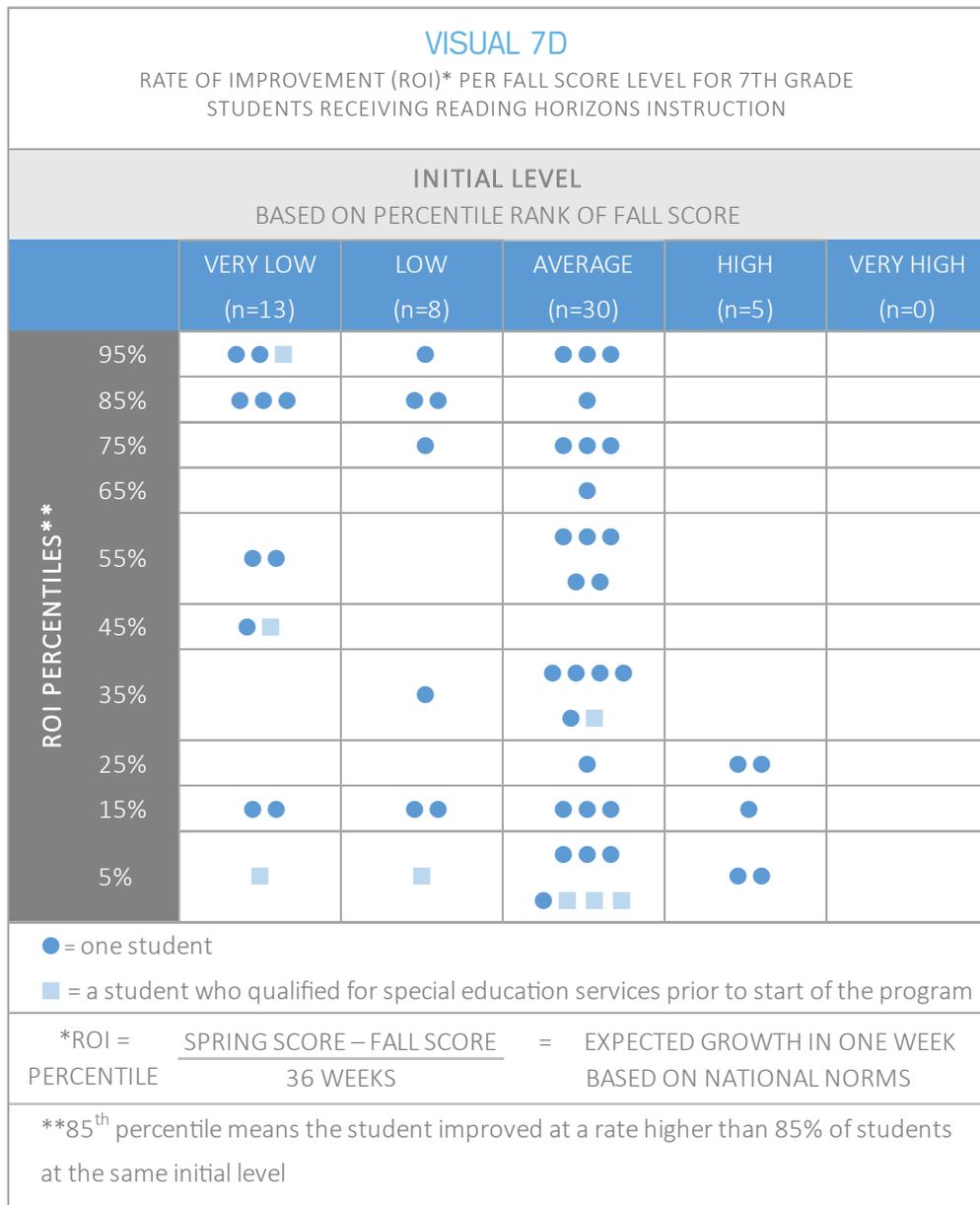
- Students whose initial scores indicated they would benefit from or require intensive instruction (Tier III) decreased from fall to spring (Visual 7C).
- The percentage of students indicated they would benefit from or require strategic instruction (Tier II) increased by 14% (Visual 7C).
- Some of this increase was made possible by a decrease in the number of students with scores correlated with benefiting from baseline or Tier I instruction (Visual 7C).



- 45% of students progressed at the average rate when compared to national norms of students in their same initial level (Visual 7D).

**NOTE:** Initial level is determined by fall score (Very Low = initial score within 10<sup>th</sup> percentile and below; Low = 11<sup>th</sup>-25<sup>th</sup> percentile; Average = 26<sup>th</sup>-75<sup>th</sup> percentile; High = 76<sup>th</sup>-90<sup>th</sup> percentile; Very High = 91<sup>st</sup> percentile and above).

- Eighteen students' ROI scores indicated that they closed the gap (between 50<sup>th</sup> and 85<sup>th</sup> percentile) (Visual 7D).
- Seven students demonstrated ROI scores (>85<sup>th</sup> percentile) that placed them in the "Ambitious" group (Visual 7D).



# GRADE 8

## TYPE OF STUDY

*Pre-/Post-*

## TYPE OF SCHOOL

*Public*

## POPULATION OF STUDENTS

*Struggling readers within a general education population; some students (23%) were deemed eligible for special education instruction prior to the start of the program*

## GRADE LEVEL

*Grade 8*

## LENGTH OF DATA COLLECTION

*1 school year*

## LOCATION

*Southern United States,  
West South Central Region*

## POPULATION OF CITY

*11,320 people*

## SOCIO-ECONOMIC STATUS

*63% of total enrollment qualified for free or reduced lunch*

## NUMBER OF SCHOOLS

*1 school*

## NUMBER OF STUDENTS

*64 students*

## READING HORIZONS MATERIALS

*Reading Horizons Software and Direct Instruction Materials*

## ASSESSMENT TOOLS

*Measures of Academic Progress (MAP); AIMSweb MAZE*

## Summary of Findings

*Refer to page 4.*

## Background

A middle school resource teacher implemented the Reading Horizons program with 64 8<sup>th</sup> grade students. Pre- and post-test scores for all of the students were gathered before and after the students had used the Reading Horizons interactive software.

## Resources

Reading Horizons software and direct instruction materials, multiple assessments, and a teacher trained in the Reading Horizons method.

## Implementation

Bailey Middle School used multiple assessments, such as KPREP, Discovery Education, and MAP, to identify at-risk students. It began using Reading Horizons as an intervention for 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grade students in the bottom 10<sup>th</sup> percentile. The students used the program daily and stayed in the program until they tested above the 10<sup>th</sup> percentile or tested out of the program.

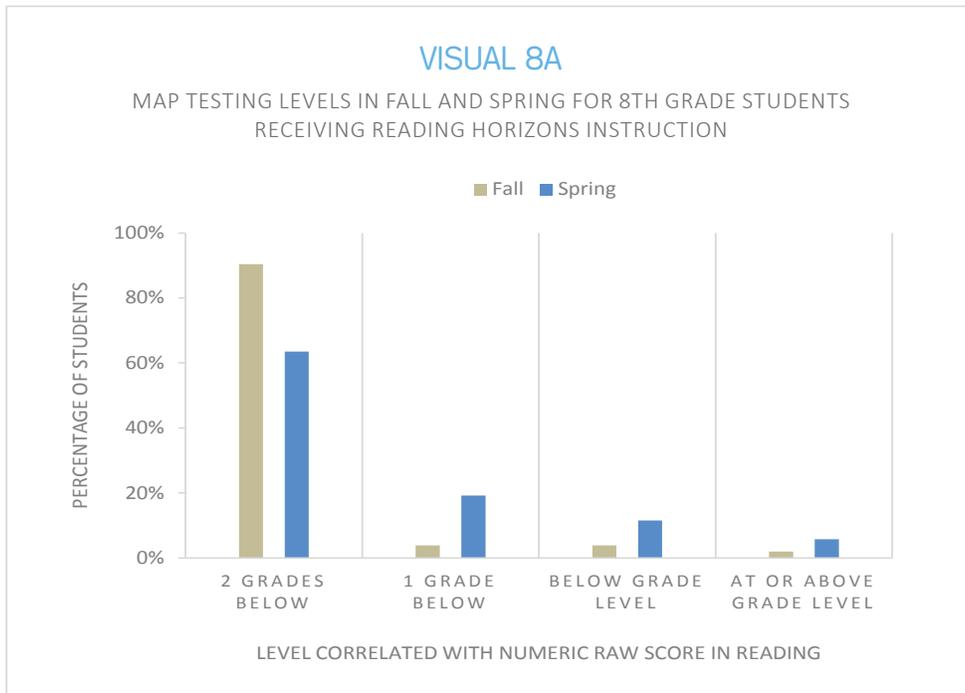
Outcome data was recorded for 64 students who received Reading Horizons instruction during their 8<sup>th</sup> grade school year. MAP and AIMSweb MAZE tests were administered at the start (fall), middle (winter), and end (spring) of the school year. Some students moved during the study and others had data missing. MAP scores for all three data points were reported for 52 of the students. Complete AIMSweb MAZE data was reported for 56 of the students.

Outcomes

**Measures of Academic Progress (MAP) Testing**

**Assessment Description:** Numeric scores are categorized into levels drawn from national normative data: above grade level, at grade level, and below grade level. Below grade level data is broken into 3 sub-categories: Below, 1 grade below, and 2 grades below. The benchmark changes during the school year, so students who demonstrate no change in their numeric scores from the start to the end of the school year may end at a lower level than the one in which they started.

- The group average gain on the MAP scores from fall to spring was 7.4 points.
- 79% of students demonstrated a gain in their fall to spring scores; 19.5% of this subgroup were deemed eligible for special education services prior to the beginning of the program.
- Scores for 2% of students remained the same fall to spring.
- 19% of students demonstrated a loss in score from fall to spring; 30% of this group were deemed eligible for special education services prior to the start of the program.



- Initial scores for 90.4% of students fell within the lowest category (2 grades below). After a year of Reading Horizons instruction, 26.5% of that group had spring scores that fell within a higher level; therefore, there was slightly more than a quarter reduction in the number of students in the lowest category.
- 31% of students had a spring score that fell within a higher level than their fall score. Of those students, 56% gained one level, 25% of students' scores increased by two levels, 13% of students demonstrated a gain of three levels, and 6% of this subgroup had a four-level increase in their scores.
- Seven students gained at least one level at mid-year testing (fall to winter); however, when the benchmark increased again at the end of the year, four of them were unable to retain the level gained, and they finished the year in the same level in which they began.

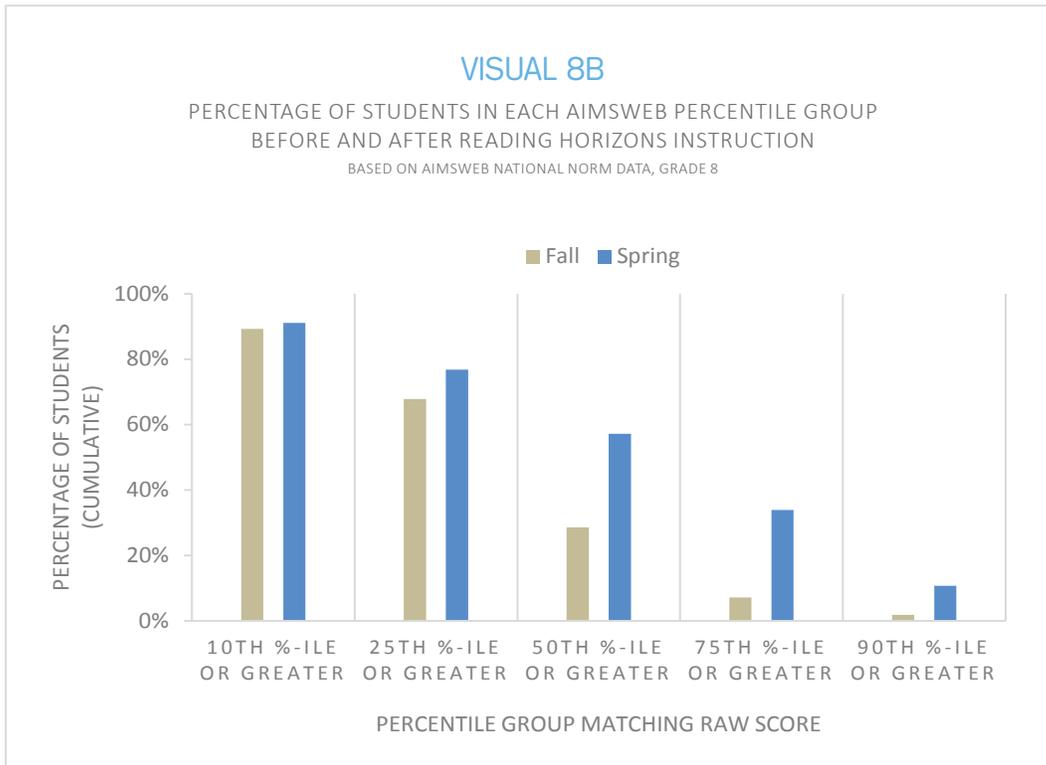
### **AIMSweb MAZE Assessment in Reading**

**Assessment Description:** *The AIMSweb MAZE assessment, although affiliated with a curriculum publisher, is not program-specific; it is a valid and reliable tool for assessing students regardless of the instructional program implemented. AIMSweb MAZE is a test of reading comprehension. National and aggregate norms are available for each school year, the national norms being slightly higher than the aggregate.*

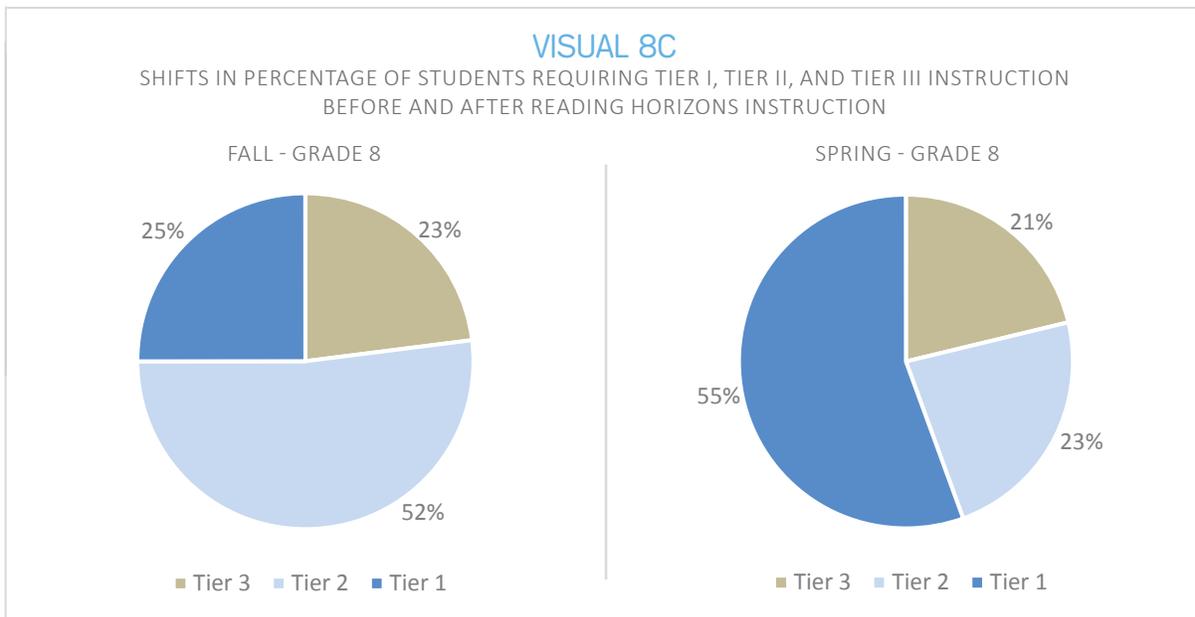
*This class's data were compared to national norms for the same year in which the program was implemented. Student raw scores can be compared to norm scores at the 10<sup>th</sup>, 25<sup>th</sup>, 75<sup>th</sup>, 90<sup>th</sup>, and 91<sup>st</sup> percentiles.*

*In addition, the publisher provides data on Rate of Improvement (ROI), by which students' increase or decrease in reading comprehension skills can be compared to students with similar fall scores. ROI data is provided by percentile for each of 5 groups: Very Low (students with fall scores at or below the 10<sup>th</sup> percentile); Low (fall scores in the 11<sup>th</sup>-25<sup>th</sup> percentile); Average (26<sup>th</sup>-75<sup>th</sup> percentile); High (76<sup>th</sup>-90<sup>th</sup> percentile); and Very High (91<sup>st</sup> percentile and above). Additionally, cut-off scores that correlate with tiers of instruction yield information regarding the intensity of instruction that will likely produce the most benefit for students.*

- The following scores are the average AIMSweb scores for 8<sup>th</sup> grade participants: fall– 8.73; winter–22.91; spring–27.89. The average gain in AIMSweb scores from fall to spring was 9.1 points.
- 84% of students increased their AIMSweb MAZE scores from fall to spring; 17% of this subgroup were deemed eligible for special education services prior to the start of the program.
- Scores for 7% of students remained the same (25% of students qualified for special education services prior to the start of the program).
- Spring scores for 9% of students decreased compared to their fall scores; 40% of this subgroup were deemed eligible for special education services prior to the start of the program.
- Compared to fall scores, spring scores for 8<sup>th</sup> grade students correlated with higher percentile rankings (Visual 8B).



- The percentage of students whose initial scores indicated they would benefit from intensive (Tier III) and strategic (Tier II) instruction decreased from fall to spring (Visual 8C).
- The percentage of students whose initial scores indicated they would benefit from baseline instruction (Tier I) increased from fall to spring by 30% (Visual 8C).



- 64% of students progressed at the average rate or better compared to national norms of students in their same initial level (as determined by fall score) (Visual 8D).

**Note:** Initial level is determined by fall score (Very Low = initial score within 10<sup>th</sup> percentile and below; Low = 11<sup>th</sup>-25<sup>th</sup> percentile; Average = 26<sup>th</sup>-75<sup>th</sup> percentile; High = 76<sup>th</sup>-90<sup>th</sup> percentile; Very High = 91<sup>st</sup> percentile and above).

- Thirteen students' ROI scores indicated that they closed the gap (between 50<sup>th</sup> and 85<sup>th</sup> percentile) (Visual D).
- Twenty-three students demonstrated ROI scores that placed them in the "Ambitious" group (>85<sup>th</sup> percentile) (Visual 8D).
- Of the 36% of students who progressed at a below average rate, slightly fewer than half of them (45%) qualified for special education services, and based on individual need, may have had an expected rate of progress differing from the trend of the national norm data (Visual 8D).

VISUAL 8D						
RATE OF IMPROVEMENT (ROI)* PER FALL SCORE LEVEL FOR 8TH GRADE STUDENTS RECEIVING READING HORIZONS INSTRUCTION						
INITIAL LEVEL						
BASED ON PERCENTILE RANK OF FALL SCORE						
	VERY LOW (n=8)	LOW (n=13)	AVERAGE (n=31)	HIGH (n=3)	VERY HIGH (n=1)	
ROI PERCENTILES**	95%	●●●■	●●● ●●	●●●●●●●● ●●●●●●●●	●	
	85%		●	●●●■		
	75%		●	●	●	
	65%	●		●●●●		
	55%			●●		
	45%			●■	●	
	35%	■	●■	■■		
	25%		●●	●●■		
	15%	■	●●			●
	5%	■		●■		
● = one student						
■ = a student who qualified for special education services prior to start of the program						
*ROI = $\frac{\text{SPRING SCORE} - \text{FALL SCORE}}{36 \text{ WEEKS}}$ = EXPECTED GROWTH IN ONE WEEK BASED ON NATIONAL NORMS						
**85 <sup>th</sup> percentile means the student improved at a rate higher than 85% of students at the same initial level						



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