

# Gains Analysis

## Norwalk Public Schools

---

### *System 44*

## End-of-Year Summary Report

Results Based on Program Data

08/01/2016 to 01/20/2017

# Executive Summary

In partnership with the district, Houghton Mifflin Harcourt has analyzed data from five sites that implemented the *System 44* reading intervention program this school year.

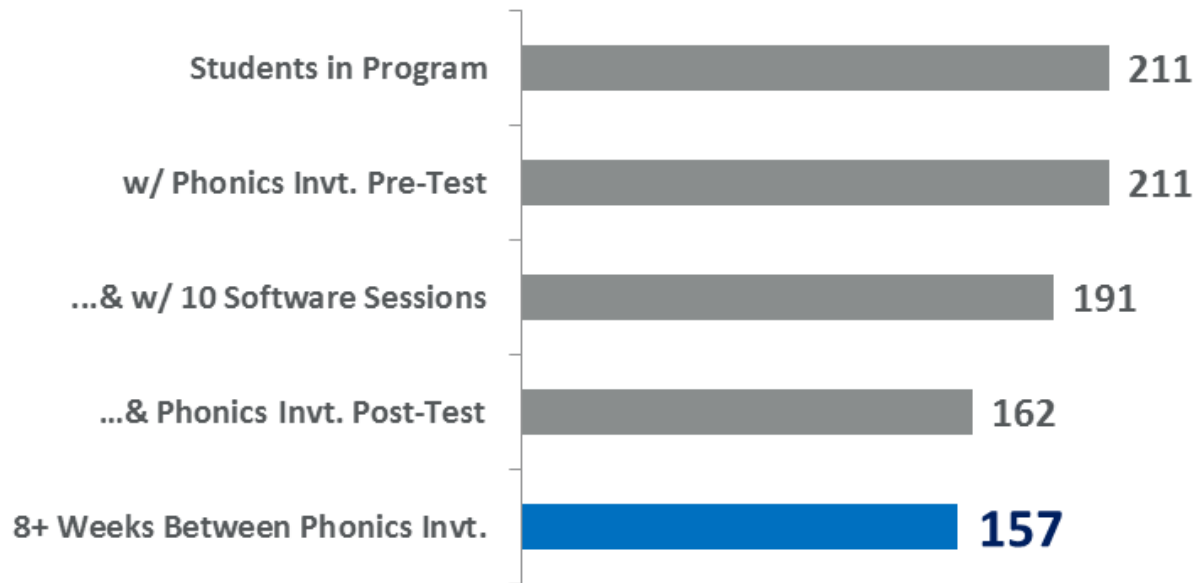
## *Preliminary Analysis Observations*

- The analysis includes data from 211 *System 44* students, with 157 having enough software use and *Phonics Inventory* testing to be included in Gains Analysis.
- End-of-year 2015-2016 data export indicates evidence of **strong** growth with **good** software use in *System 44*.
- *System 44* students completed an average of 6 Series in 38 software sessions of about 15 minutes in length.

# Analysis Sample Selection Overview

## How Many Student Records Had Sufficient Data for Analysis?

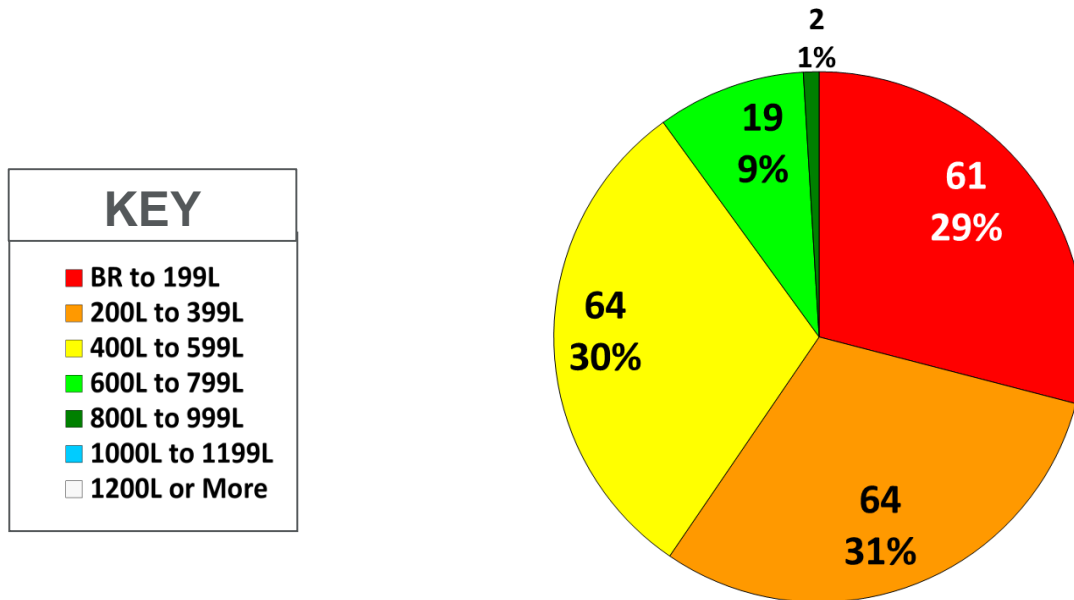
### System 44 Record



Gains analysis inclusion criteria were set to include students in *System 44* who had at least 20 software sessions and a minimum of two test administrations at least eight weeks apart (*The Phonics Inventory* for *System 44* students).

# Placement *Reading Inventory* Overview

## Were Students Appropriately Placed in *System 44*?

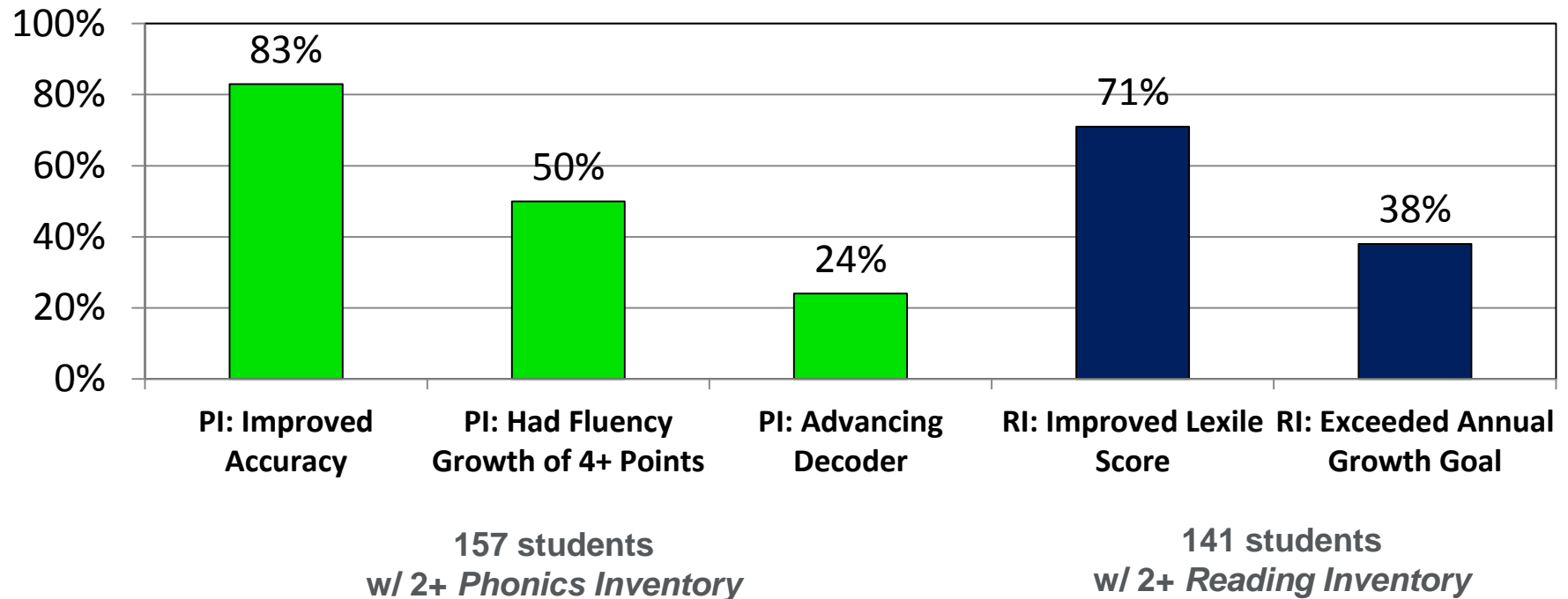


*System 44* Students at Placement

Students with **low Lexile measurements** (BR to 400L in Grades 3-5 & BR to 600L in Grades 6-12) should be screened with *The Phonics Inventory*. Pre-Decoder, Beginning or Developing Decoder status students should be placed in *System 44* but Advancing Decoders likely belong in a *Tier 2* intervention program such as HMH's *READ 180*.

# Phonics and Reading Inventory Results

## Overview of Test Results for System 44 Students



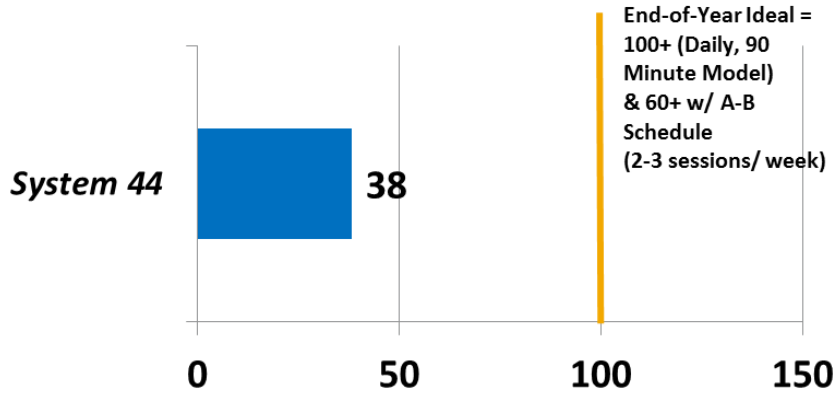
This chart shows that foundational reading skills are improving; reading comprehension results often depend on foundational reading skills.

Meeting annual Lexile growth goals is more likely when students reach Series 20 to 25 or when students demonstrate Advancing Decoder status on *The Phonics Inventory*.

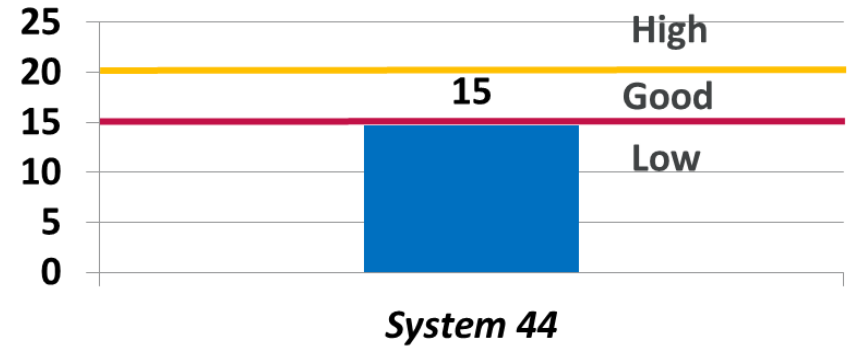
*Analysis Note: Above data reflects ONLY those students with sufficient software usage to meet the Gains Analysis Sample criteria and Phonics Inventory/Reading Inventory tests at least 8 weeks apart.*

# Summary Program Usage

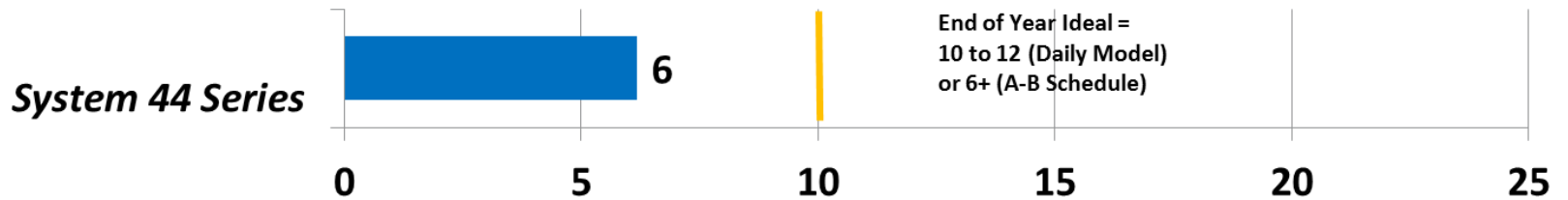
## Software Sessions



## Minutes Per Session

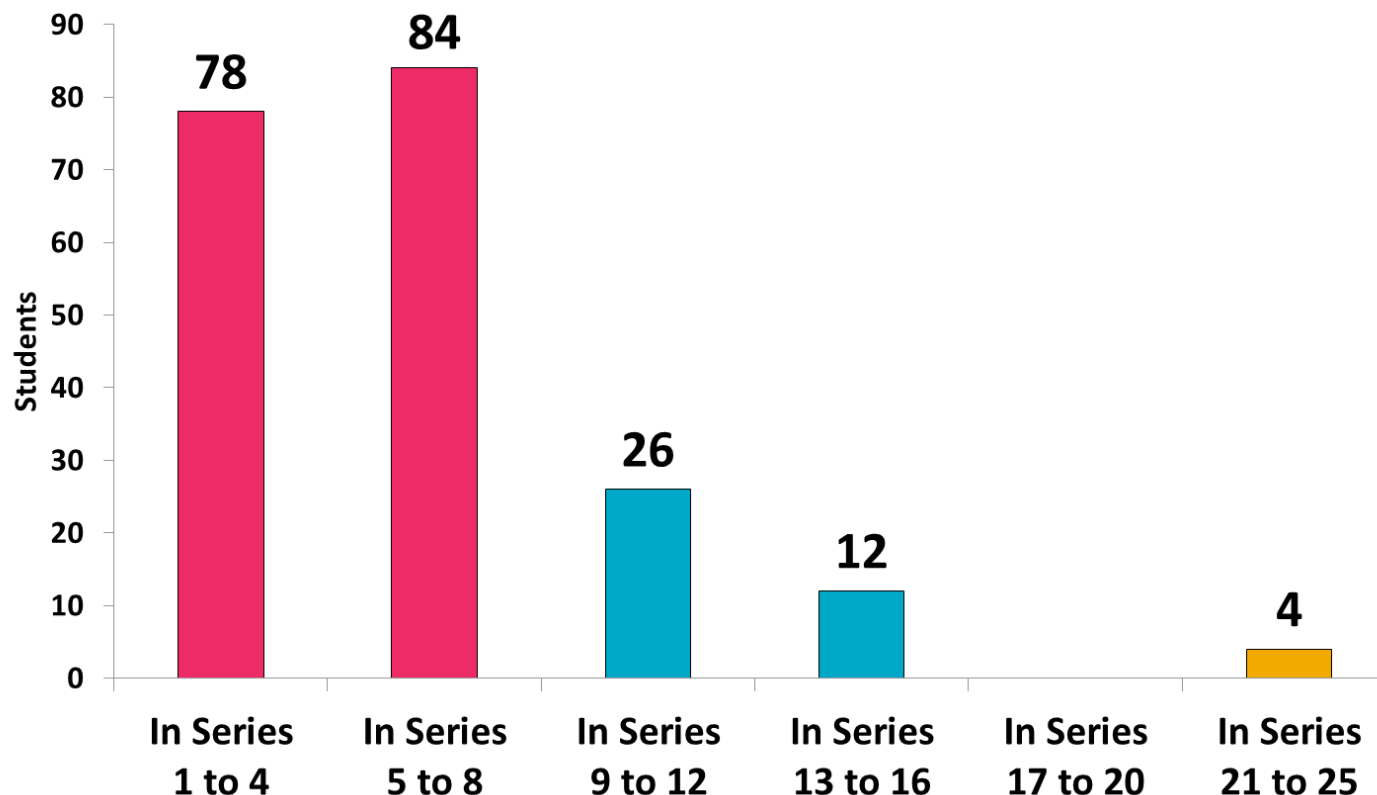


## Software Content Units



# System 44 Student Progress and Use

## Overview of Students' Current Location in Program



The chart above shows how much content *System 44* students have completed. Students should strive to complete **at least** 10 Series in a year, and to complete all 25 during their time in *System 44*.

# System 44 Summary Implementation Metrics

## Student Content Completion as a Measure of Growth

School	Number of Students	Software Metrics			Content Progress			
		Mean Sessions	Mean Sessions Per Week	Mean Minutes per Session	Mean Topics Completed	Mean Fast Tracked Topics	Mean Minutes per Topic	Mean Current Series
Nathan Hale Middle School	38	43	3.1	16	37	14	33	6
Norwalk High School	5	14	1.4	9	4	0	39	1
Ponus Ridge Middle School	59	39	2.3	20	50	22	32	8
Roton Middle School	60	40	2.8	12	40	18	31	6
West Rocks Middle School	42	35	2.6	11	28	12	41	4
<b>Students Placed in Series 1</b>	<b>78</b>	<b>36</b>	<b>2.6</b>	<b>15</b>	<b>19</b>	<b>0</b>	<b>32</b>	<b>3</b>
<b>Students Placed in Series 4</b>	<b>110</b>	<b>39</b>	<b>2.6</b>	<b>14</b>	<b>53</b>	<b>30</b>	<b>35</b>	<b>8</b>
<b>Students Using System 44</b>	<b>204</b>	<b>38</b>	<b>2.6</b>	<b>15</b>	<b>39</b>	<b>17</b>	<b>34</b>	<b>6</b>

2 days per Topic (avg.)

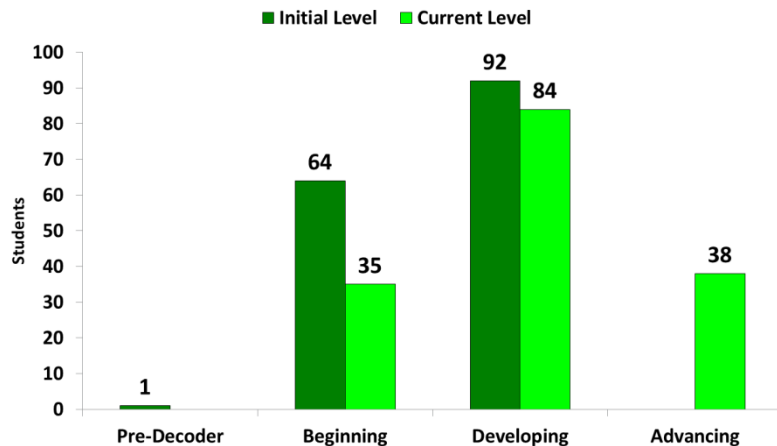
On a standard daily implementation of *System 44*, schools can achieve 100 sessions of usage in a school year. In the standard implementation model, students should use the software for 15-20 minutes each day (or session). Regular use of software helps students complete the Topics more quickly; when all 160 Topics have been completed, the student is ready to exit *System 44*. **Review the results here to identify successes as well as schools that may need additional support. Use the *System 44* Response to Intervention Summary Report for more information.**

*Analysis Note: Because Phonics Inventory and Reading Inventory use varies greatly, this chart shows software use for ALL System 44-enrolled students to avoid skewing usage results based on test administration. If students were manually placed in a specific Series other than #1 or #4 then they are reported in the total and school-level results but cannot be reported by initial placement Series.*



# System 44 Student Phonics Inventory Results

## Total Students by Initial and Current Decoding Level



		Current Phonics Inventory Decoding Levels				Initial Level
		Pre-Decoder	Beginning	Developing	Advancing	
Initial Phonics Inventory Decoding Levels	Pre-Decoder			1		1
	Beginning		30	28	6	64
	Developing		5	55	32	92
	Advancing					
Current Level			35	84	38	157
		67	(43%)	Students Moved UP		
		85	(54%)	Students Stayed in Level		
		5	(3%)	Students Moved Down		

HMH recommends that *System 44* students complete *The Phonics Inventory* three times a year for screening and to monitor progress. Students should be moving into higher levels of decoding as they progress through the program. Strongest results are typically achieved when students follow the *System 44* Instructional Model daily and when care is taken to ensure a positive testing environment. **Compare pre-test and post-test results to spotlight successes and identify areas that need additional focus. Review *The Phonics Inventory* Summary Progress Report for more information.**

*Analysis Note: Above data reflects ONLY those students with sufficient software usage and Phonics Inventory test administrations to meet the Gains Analysis Sample criteria.*

# Summary *Phonics Inventory* Results

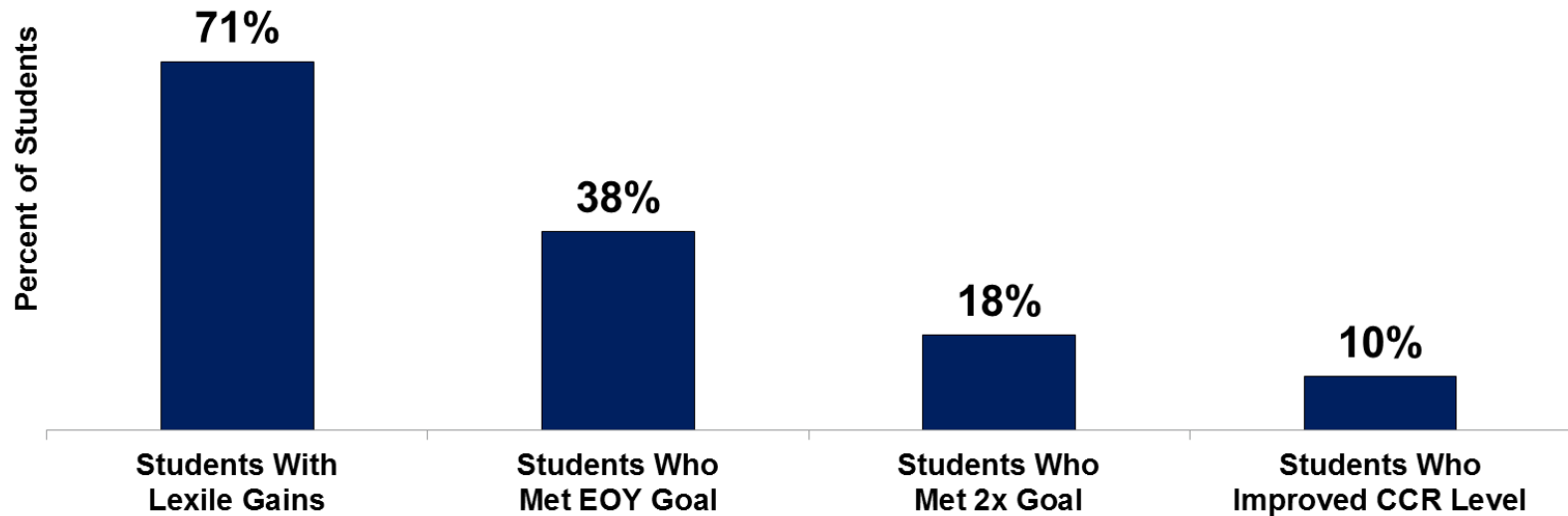
## Accuracy and Fluency Metrics by School

School	Number of Students	Initial Phonics Invt. Accuracy of 60	Current Phonics Invt. Accuracy of 60	Change in Accuracy	% of Students with Improved Accuracy	Initial Phonics Invt. Fluency of 60	Current Phonics Invt. Fluency of 60	Change in Fluency	% of Students with 4+ Points Gain in Fluency	% of Students with Advancing Decoder Status
Nathan Hale Middle School	29	43	50	7	86%	12	15	3	41%	17%
Norwalk High School	3	41	42	1	67%	8	9	1	33%	0%
Ponus Ridge Middle School	46	39	44	5	83%	13	19	7	63%	41%
Roton Middle School	42	43	49	6	81%	13	18	5	48%	24%
West Rocks Middle School	37	39	46	7	86%	11	16	4	43%	11%
<b>System 44 Phonics Invt. Gains Sample</b>	<b>157</b>	<b>41</b>	<b>47</b>	<b>6</b>	<b>83%</b>	<b>12</b>	<b>17</b>	<b>5</b>	<b>50%</b>	<b>24%</b>

Results for *System 44* students with two or more *Phonics Inventory* administrations & 20+ software sessions are displayed above with the initial and most recent tests providing metrics. Students with limited Series completion between tests tend not to demonstrate changes in Accuracy and Fluency.

- Accuracy growth indicates students have improved their ability to recognize and decode words—a prerequisite skill for fluent reading.
- Fluency growth indicates students have improved their ability to recognize and decode words with automaticity—a prerequisite skill for reading comprehension. Fluency growth of four points is one year of growth.
- Students who reach the Advancing Decoder level tend to demonstrate the greatest Lexile growth by end-of-year *Reading Inventory* administration.

# Summary *Reading Inventory* Growth Metrics



**Total Students in  
*Reading Inventory*  
Sample**



**NEXT**GENERATION

141 Students  
w/ *Reading Inventory*

These results are from students with 20+ software sessions and *Reading Inventory* tests that were at least eight weeks apart. Numbers on subsequent slides may vary because they are based on *Phonics Inventory* rather than *Reading Inventory* results.

# Appendix

# System 44 Data Inclusion Process by School

School	Students with 8+ Weeks Between Reading Inventory Admins	Students with Reading Inventory Post-Test	Students with Reading Inventory Pre-Test	Students Enrolled in System 44	Students with Phonics Inventory Pre-Test	Students with Phonics Inventory Post-Test	Students with 8+ Weeks Between Phonics Inventory Admins
Nathan Hale Middle School	36	36	38	38	38	31	29
Norwalk High School	5	5	5	5	5	5	3
Ponus Ridge Middle School	58	58	64	64	64	56	46
Roton Middle School	19	20	60	61	61	45	42
West Rocks Middle School	23	23	43	43	43	37	37
<b>System 44 Student Totals</b>	<b>141</b>	<b>142</b>	<b>210</b>	<b>211</b>	<b>211</b>	<b>174</b>	<b>157</b>

Lexile Sample

Starting Sample

Phonics Sample

Yellow highlights show small samples and points where students were lost from a site sample.

To be in the Gains Analysis, students need to have at least two *Phonics Inventory* tests a minimum of eight weeks apart, and must have at least 10 software sessions **per semester** (20 per year). This table shows how many students from each site met each criterion for analysis. As you go from left to right, the number shows how many students met that criterion and **all others to the left**.

# Low and High End Lexile Growth Goals

## Using Student's Fall Lexile & Grade Level to Set Goals for Students

- HMH *Reading Inventory* can be used to set reading goals and to compare students' response to instruction to growth expectations from fall to spring.
- Monitoring growth helps educators to determine if students are on track to meet achievement standards.
- Expected growth is determined by fall *Reading Inventory* Lexile and grade level. For more on using fall Lexiles to set growth goals consult the professional paper *Growth Expectations – Setting Achievable Goals*
- **Tier III reading intervention students are unlikely to reach personal growth goals without a firm grasp of phonemic principles.**
- HMH recommends that *System 44* students receive 3 *Phonics Inventory* Tests to monitor emerging skills.
- Without knowledge of a student beyond data in the export, Gains Analysts assign student records with personal Lexile growth goals derived from tables similar to the one at the right.

Grade 7 Lexile-Based Normal Growth Bands		
Fall Lexile Range	Low End of Normal Growth Range	High End of Normal Growth Range
BR to 199L	220	350
200L to 299L	165	240
300L to 399L	125	185
400L to 499L	90	145
500L to 599L	70	115
600L to 699L	55	90
700L to 799L	45	75
800L to 899L	35	65
900L to 999L	30	60
1000L to 1099L	25	55
1100L to 1199L	15	45
1200L to 1299L	0	35



# College and Career Ready Proficiency Levels

## Spring Proficiency Targets for Students to Meet Rigorous Demands

Grade	Below Basic	Basic	Proficient	Advanced
K	N/A	BR	0 to 279L	280 & Above
1	BR	0L to 189L	190L to 534L	535L & Above
2	BR to 219L	220L to 419L	420L to 654L	655L & Above
3	BR to 329L	330L to 519L	520L to 824L	825L & Above
4	BR to 539L	540L to 739L	740L to 944L	945L & Above
5	BR to 619L	620L to 829L	830L to 1014L	1015L & Above
6	BR to 729L	730L to 924L	925L to 1074L	1075L & Above
7	BR to 769L	770L to 969L	970L to 1124L	1125L & Above
8	BR to 789L	790L to 1009L	1010L to 1189L	1190L & Above
9	BR to 849L	850L to 1049L	1050L to 1264L	1265L & Above
10	BR to 889L	890L to 1079L	1080L to 1339L	1340L & Above
11 / 12	BR to 984L	985L to 1184L	1185L to 1389L	1390L & Above

With the release of *Reading Inventory College & Career*, HMH and MetaMetrics (creator of the Lexile Framework) updated the Lexile ranges that comprise Below Basic, Basic, Proficient, and Advanced performance levels for each grade. To establish the new performance levels, MetaMetrics conducted an extensive study of college and career texts. The new score ranges more accurately reflect the increased expectations for college and career readiness and indicate whether students are on track to comprehend college and career level texts by the end of high school.