

Achievement and Growth Norms for Spanish MAP Reading Fluency Foundational Skills

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Table of Contents

1. Introduction	1
1.1. Purpose of the Study	1
1.2. Spanish MAP Reading Fluency Overview	1
2. Methodology	3
2.1. Norming Sample	3
2.2. Norming Procedure	7
3. Results	8
3.1. Descriptive Statistics of Test Scores	8
3.2. Pearson Correlation Coefficients	9
3.3. Normality Assumption	10
3.4. Achievement and Growth Norms	15
4. Conclusion and Discussion	28
References	29

List of Tables

Table 1.1. Measures Assessed in Each Domain of the Spanish Version of Foundational Skills .	2
Table 2.1. Numbers and Percentages of Test Events in the Norming Sample	3
Table 2.2. Norming Sample Demographics	5
Table 2.3. U.S. Student Distribution by Census Region and Division	6
Table 3.1. Descriptive Statistics of Test Scores in the Norming Sample	8
Table 3.2. Pearson Correlation Coefficients (<i>r</i>) Among Fall, Winter, and Spring Scores	10
Table 3.3. Snapshot of Norms—Language Comprehension, Grade K	16
Table 3.4. Snapshot of Norms—Language Comprehension, Grade 1	17
Table 3.5. Snapshot of Norms—Language Comprehension, Grade 2	18
Table 3.6. Snapshot of Norms—Language Comprehension, Grade 3	19
Table 3.7. Snapshot of Norms—Phonological Awareness, Grade K	20
Table 3.8. Snapshot of Norms—Phonological Awareness, Grade 1	21
Table 3.9. Snapshot of Norms—Phonological Awareness, Grade 2	22
Table 3.10. Snapshot of Norms—Phonological Awareness, Grade 3	23
Table 3.11. Snapshot of Norms—Phonics & Word Recognition, Grade K	24
Table 3.12. Snapshot of Norms—Phonics & Word Recognition, Grade 1	25
Table 3.13. Snapshot of Norms—Phonics & Word Recognition, Grade 2	26
Table 3.14. Snapshot of Norms—Phonics & Word Recognition, Grade 3	27

List of Figures

Figure 3.1. Histograms, Q-Q Plots, and CDF Curves for Phonological Awareness Scores— Grade K, Fall	11
Figure 3.2. Histograms, Q-Q Plots, and CDF Curves for Phonological Awareness Scores— Grade K, Winter	12
Figure 3.3. Histograms, Q-Q Plots, and CDF Curves for Phonological Awareness Scores— Grade K, Spring	13
Figure 3.4. Scatterplot Matrix Among Fall, Winter, and Spring Phonological Awareness Scores—Grade K.....	14

1. Introduction

1.1. Purpose of the Study

This report documents the norming procedure used to produce the achievement and growth user norms for Spanish MAP® Reading Fluency™ Foundational Skills that includes measures in three domains: Phonological Awareness, Phonics & Word Recognition, and Language Comprehension. This report also provides snapshots of the achievement and growth norms for each grade and domain that are available in score reports. This study used a model-based norming procedure employed in the course-specific MAP Growth Mathematics norming study (Thum & He, 2019).

For each domain, achievement and growth norms were developed for grades K–3. These norms allow educators to compare a student’s achievement—and changes in achievement between test occasions (i.e., growth)—with the performance of students in the same grade at comparable instructional stages of the school year. In achievement norms, a student’s performance on the Spanish MAP Reading Fluency test is associated with a percentile ranking that shows how well the student performed in a domain relative to students in the norming group. Growth norms provide a relative evaluation of a student’s growth from one testing period to another, such as from fall to spring. The achievement norms cover three terms (fall, winter, and spring), and the growth norms cover fall-to-winter, winter-to-spring, and fall-to-spring growth within a grade level.

1.2. Spanish MAP Reading Fluency Overview

Though Spanish MAP Reading Fluency is designed to support biliteracy programs and emergent bilinguals in multiple educational contexts, Spanish MAP Reading Fluency Foundational Skills measures were developed with attention to orthographic differences between the English and Spanish languages (NWEA, 2026). For example, Spanish has a highly transparent orthography, meaning that sounds are represented relatively consistently in written form, whereas English orthography is less transparent. Consequently, Spanish Foundational Skills measures focus predominantly on syllables rather than on phonemes as is more common in English.

Like its English counterpart, Spanish MAP Reading Fluency is designed to support students on their path to reading comprehension by assessing both oral reading fluency and foundational reading skills. The assessment is administered as a multistage adaptive test in which students receive easier or more-difficult tasks based on previous tasks. Tests can be administered in a group setting rather than one-on-one, helping preserve classroom instructional time. Students typically take the assessment three times a year in the fall, winter, and spring.

Teachers can choose from various test forms; however, adaptive Oral Reading is the default form. It routes students to either the Oral Reading Fluency track if they are ready to read passages or to the Foundational Skills track if they are not. Teachers can also assign students directly to either track. Table 1.1 presents the measures assessed in each domain of the Spanish Foundational Skills track. As shown in the table, each Foundational Skills domain includes multiple measures. In the Phonological Awareness and Phonics & Word Recognition domains, a subset of measures is selected adaptively during each test event based on the student’s performance within a progression of skills. In the Language Comprehension domain, both Picture Vocabulary and Listening Comprehension measures are administered to all students.

All Spanish Foundational Skills items are scored dichotomously, and each domain is scaled separately. The Rasch model was used for item calibration. Student ability estimates were placed on a scale with a mean of 500 and a standard deviation of 10 using test events collected from Fall 2019 through Spring 2022. Scores within each domain can be compared across grades.

Table 1.1. Measures Assessed in Each Domain of the Spanish Version of Foundational Skills

Domain	Measure
Phonological Awareness	Rhyme Completion Counting Syllables Syllable Blending Initial Sound Matching Phoneme Blending Segment & Count Phonemes Syllable Addition/Deletion Phoneme Substitution
Phonics & Word Recognition	Letter Knowledge Letter-Sound Fluency Words' Initial Letters Building Words: One Syllable Missing Decoding: Beginning Words Building Words: Two Syllables Missing Decoding: Multi-Syllable Words Building Words: All Syllables Missing Sentence Reading Fluency
Language Comprehension	Picture Vocabulary Listening Comprehension

2. Methodology

2.1. Norming Sample

This norming study used Spanish test events from the Phonological Awareness, Phonics & Word Recognition, and Language Comprehension domains administered to students in grades K–3 during three school years: 2022/23, 2023/24, and 2024/25.

During construction of the norming sample, duplicate records were addressed in two stages. First, when a student had records in the same grade across multiple school years, only the record from the most recent school year was retained. This approach eliminated repeated student-by-grade observations while preserving the most current information. Second, within each domain, duplicate records for the same student, grade, and testing term were resolved by retaining the observation with the lower measurement error. This criterion ensured that when multiple candidate records were available for a given testing occasion, the most precise score estimate was selected. The final norming sample, therefore, contained a unique set of student-grade-term observations within each domain.

Table 2.1 presents the number of test events in each domain by term, grade, and school year, along with the corresponding percentages of those test events over the total number of test events in the three school years. The results reveal several evident patterns.

First, testing volume was highly concentrated in the early grades. Across domains, grade 1 accounted for the largest share of test events (37.7%), followed by kindergarten (35.5%), grade 2 (20.9%), and grade 3 (5.9%). Together, kindergarten and grade 1 represented more than 70% of all test events. This pattern may indicate that most grade 3 students have progressed well beyond foundational reading skills.

Second, assessment activity was relatively stable between the 2022/23 (35.9%) and 2023/24 (36.6%) school years, with 2023/24 showing the highest testing volume. In contrast, the 2024/25 school year accounted for just 27.5% of all test events, reflecting lower participation relative to the prior two years.

Third, within each school year, testing volume generally decreased from fall to spring, with the decrease most pronounced in grades 2 and 3. This pattern suggests greater assessment participation earlier in the academic year and in the earlier grades.

Finally, the distributions were nearly identical across Phonological Awareness, Phonics & Word Recognition, and Language Comprehension, indicating that assessment administration patterns were consistent across the three domains.

Table 2.1. Numbers and Percentages of Test Events in the Norming Sample

Domain	Term	Test Events by Grade								All Test Events	
		K		1		2		3		N	%
		N	%	N	%	N	%	N	%		
Phonological Awareness	Fall 2022	11,921	3.6	14,523	4.4	10,407	3.1	3,024	0.9	39,875	12.0
	Winter 2023	13,502	4.0	17,576	5.3	9,096	2.7	2,445	0.7	42,619	12.8
	Spring 2023	15,532	4.7	12,618	3.8	7,297	2.2	1,873	0.6	37,320	11.2

Domain	Term	Test Events by Grade								All Test Events	
		K		1		2		3		N	%
		N	%	N	%	N	%	N	%		
	2022/23 Total	40,955	12.3	44,717	13.4	26,800	8.0	7,342	2.2	119,814	35.9
	Fall 2023	12,969	3.9	17,600	5.3	12,395	3.7	4,352	1.3	47,316	14.2
	Winter 2024	14,389	4.3	18,102	5.4	6,021	1.8	1,704	0.5	40,216	12.1
	Spring 2024	17,442	5.2	10,843	3.3	4,851	1.5	1,343	0.4	34,479	10.3
	2023/24 Total	44,800	13.4	46,545	14.0	23,267	7.0	7,399	2.2	122,011	36.6
	Fall 2024	10,688	3.2	13,907	4.2	7,916	2.4	2,469	0.7	34,980	10.5
	Winter 2025	7,720	2.3	10,989	3.3	7,425	2.2	1,037	0.3	27,171	8.1
	Spring 2025	14,092	4.2	9,686	2.9	4,457	1.3	1,348	0.4	29,583	8.9
	2024/25 Total	32,500	9.7	34,582	10.4	19,798	5.9	4,854	1.5	91,734	27.5
	Overall	118,255	35.5	125,844	37.7	69,865	20.9	19,595	5.9	333,559	100.0
Phonics & Word Recognition	Fall 2022	11,921	3.6	14,523	4.4	10,407	3.1	3,024	0.9	39,875	12.0
	Winter 2023	13,502	4.0	17,576	5.3	9,096	2.7	2,445	0.7	42,619	12.8
	Spring 2023	15,532	4.7	12,618	3.8	7,297	2.2	1,873	0.6	37,320	11.2
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	Fall 2024	10,689	3.2	13,908	4.2	7,916	2.4	2,469	0.7	34,982	10.5
	Winter 2025	7,720	2.3	10,989	3.3	7,426	2.2	1,037	0.3	27,172	8.1
	Spring 2025	14,092	4.2	9,686	2.9	4,457	1.3	1,348	0.4	29,583	8.9
Language Comprehension	2024/25 Total	32,501	9.7	34,583	10.4	19,799	5.9	4,854	1.5	91,737	27.5
	Overall	118,256	35.5	125,845	37.7	69,866	20.9	19,595	5.9	333,562	100.0
	Fall 2022	11,921	3.6	14,523	4.4	10,407	3.1	3,024	0.9	39,875	12.0
	Winter 2023	13,502	4.0	17,576	5.3	9,096	2.7	2,445	0.7	42,619	12.8
	Spring 2023	15,532	4.7	12,618	3.8	7,297	2.2	1,873	0.6	37,320	11.2
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	Winter 2025	7,720	2.3	10,989	3.3	7,426	2.2	1,037	0.3	27,172	8.1
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	2024/25 Total	32,501	9.7	34,583	10.4	19,799	5.9	4,854	1.5	91,737	27.5
	Overall	118,256	35.5	125,845	37.7	69,866	20.9	19,595	5.9	333,562	100.0

Table 2.2 presents the numbers and percentages of students in the norming sample by gender, race/ethnicity, English Language Learner (ELL) status, and country of origin. Table 2.3 summarizes the geographic distribution of U.S. students in the norming sample for grades K–3 based on the U.S. Census Bureau’s regional and divisional classifications (U.S. Census Bureau, n.d.). Unlike the test event counts reported in Table 2.1, both Table 2.2 and Table 2.3 report unique student counts; that is, each student is counted only once across terms.

Table 2.2 indicates that the norming sample included slightly more male students than female students across all grades. Across kindergarten through grade 3, Hispanic students comprised the majority of the sample (77.4% to 81.8%). More than 60% of test takers were classified as non-English Learners. The norming sample included both U.S. and international students, although U.S. students constituted the vast majority of participants.

Table 2.2. Norming Sample Demographics

Demographic Subgroup	Students by Grade							
	K		1		2		3	
	N	%	N	%	N	%	N	%
Gender								
Female	30,531	50.0	35,163	49.8	21,659	49.0	6,171	47.5
Male	30,502	50.0	35,493	50.2	22,540	51.0	6,824	52.5
Non-Binary	5	0.0	5	0.0	3	0.0	–	–
Missing or Not Specified	18	0.0	20	0.0	12	0.0	17	0.1
Total	61,056	100.0	70,681	100.0	44,214	100.0	13,012	100.0
Race/Ethnicity								
African American/Black	678	1.1	741	1.0	492	1.1	194	1.5
American Indian or Alaska Native	636	1.0	891	1.3	513	1.2	174	1.3
Asian	206	0.3	217	0.3	118	0.3	49	0.4
Hispanic	48,230	79.0	56,232	79.6	36,154	81.8	10,065	77.4
Native Hawaiian or Other Pacific Islander	59	0.1	87	0.1	36	0.1	6	0.0
Multi-Ethnic	2,275	3.7	2,296	3.2	1,298	2.9	457	3.5
White	6,859	11.2	8,168	11.6	4,619	10.4	1,709	13.1
Missing or Not Specified	2,113	3.5	2,049	2.9	984	2.2	358	2.8
Total	61,056	100.0	70,681	100.0	44,214	100.0	13,012	100.0
English Language Learner (ELL) Status								
ELL	18,380	30.1	19,225	27.2	16,415	37.1	4,912	37.7
Non-ELL	42,676	69.9	51,456	72.8	27,799	62.9	8,100	62.3
Total	61,056	100.0	70,681	100.0	44,214	100.0	13,012	100.0
Country of Origin								
U.S.	59,951	98.2	69,168	97.9	43,771	99.0	12,869	98.9
Non-U.S.	1,105	1.8	1,513	2.1	443	1.0	143	1.1
Total	61,056	100.0	70,681	100.0	44,214	100.0	13,012	100.0

As Table 2.3 further illustrates, the U.S. student sample included students from all four census regions and most census divisions. Depending on grade level, U.S. students were drawn from 28 to 33 states across grades. Overall, the table indicates relatively broad geographic coverage but uneven representation across census divisions. The sample was highly concentrated in the South, particularly the West South Central division, which accounted for more than 70% of students at each grade level. The Pacific and East North Central divisions provided the next largest shares of students, while several other divisions contributed relatively small proportions. Texas consistently contributed the largest proportion of U.S. students, representing 70.2% to 78.3% of the U.S. study sample across grades. California contributed the next largest share in grades 1–3, while Illinois contributed the second-largest share in kindergarten and the third-largest share in grades 1–3.

Table 2.3. U.S. Student Distribution by Census Region and Division

Grade	Census Region	Census Division	State	N _{State}	N _{Student}	% _{Student}
K	Midwest	East North Central	IL, IN, MI, OH, WI	5 (5)	4,088	6.8
		West North Central	IA, MN, MO, NE, ND, SD	6 (7)	1,021	1.7
	Northeast	Middle Atlantic	NJ, NY, PA	3 (3)	1,232	2.1
		New England	ME, MA, VT	3 (6)	743	1.2
	South	East South Central	AL, KY	2 (4)	237	0.4
		South Atlantic	DE, FL, GA, MD, SC	5 (9)	1,112	1.9
		West South Central	AR, OK, TX	3 (4)	47,208	78.7
	West	Mountain	NV	1 (8)	2	0.0
		Pacific	CA, OR, WA	3 (5)	4,308	7.2
1	Midwest	East North Central	IL, IN, MI, OH, WI	5 (5)	4,080	5.9
		West North Central	MN, MO, NE, SD	4 (7)	941	1.4
	Northeast	Middle Atlantic	NJ, NY, PA	3 (3)	1,113	1.6
		New England	ME, MA, RI, VT	4 (6)	683	1.0
	South	East South Central	AL, KY, TN	3 (4)	116	0.2
		South Atlantic	DE, DC, FL, GA, MD, SC, VA	7 (9)	1,286	1.9
		West South Central	AR, OK, TX	3 (4)	55,048	79.6
	West	Mountain	NV	1 (8)	25	0.0
		Pacific	CA, OR, WA	3 (5)	5,876	8.5
2	Midwest	East North Central	IL, IN, MI, OH, WI	5 (5)	2,581	5.9
		West North Central	IA, MN, MO, NE, SD	5 (7)	716	1.6
	Northeast	Middle Atlantic	NJ, NY, PA	3 (3)	744	1.7
		New England	ME, MA	2 (6)	538	1.2
	South	East South Central	AL, KY	2 (4)	89	0.2
		South Atlantic	DE, DC, FL, GA, MD, SC, VA	7 (9)	987	2.3
		West South Central	AR, OK, TX	3 (4)	34,240	78.2
	West	Mountain	NV	1 (8)	10	0.0
		Pacific	CA, OR, WA	3 (5)	3,866	8.8
3	Midwest	East North Central	IL, IN, MI, OH	4 (5)	1,023	7.9
		West North Central	MO, NE	2 (7)	15	0.1
	Northeast	Middle Atlantic	NJ, NY, PA	3 (3)	86	0.7

Grade	Census Region	Census Division	State	N _{State}	N _{Student}	%Student
		New England	MA	1 (6)	214	1.7
	South	East South Central	AL, KY	2 (4)	46	0.4
		South Atlantic	DE, DC, FL, GA, MD, SC, VA	7 (9)	845	6.6
		West South Central	AR, LA, OK, TX	4 (4)	9,188	71.4
	West	Mountain	CO, NV	2 (8)	11	0.1
		Pacific	CA, OR, WA	3 (5)	1,441	11.2

Note. Numbers in parentheses suggest the total number of states within each census division, as defined by the U.S. Census Bureau.

2.2. Norming Procedure

The model-based approach described in Thum and He (2019) was used to develop both the achievement and growth user norms. Using a multivariate true score model that accounts for the known imprecision of scores from the fall, winter, and spring terms from students in the selected norming population, this approach provides students in each grade with achievement norms in each term and growth norms for academic gains between different terms, including fall to winter, winter to spring, and fall to spring. The true score model is expressed as follows:

$$y_{qi} = \mu_{qi} + e_{qi}$$

where y_{qi} is the observed score for student i in each term q ($q = 1$ to 3 for fall, winter, and spring, respectively); μ_{qi} is the true score for student i in each term q ; and e_{qi} is the error score for student i in each term q . The imprecision of observed scores is considered in the analysis by introducing the standard error of measurement of each score (s_{qi}) into the model, such that:

$$Var(e_{qi}) = s_{qi}^2$$

True scores of students are assumed to have a multivariate normal sampling distribution with means of γ_i and variances of T in the user population. The parameter estimates $\hat{\gamma}$, $Var(\hat{\gamma})$, and $\hat{T}$, which can be obtained by standard statistics packages such as SAS via PROC MIXED, define the joint distribution of predicted fall, winter, and spring scores in the following equation for the user norming population:

$$\hat{\mu}_i \sim MVN[\hat{\gamma}, Var(\hat{\gamma}) + \hat{T}]$$

The joint distribution provides the basis to build achievement and growth norms. The achievement norms for the scores of each term in each grade can be derived from the predicted marginal distributions, as are the marginal growth norms. The conditional growth for students in a given term can be obtained as the predicted distribution.

3. Results

3.1. Descriptive Statistics of Test Scores

Table 3.1 presents descriptive statistics for test scores in each domain by school year, grade, and term, including the mean (average) test score, standard deviation (SD), and number of test events (N). Across the three school years, mean scores in each domain generally followed the expected developmental pattern. Within grades, mean scores generally increased from fall to spring, with the largest gains observed in kindergarten and grade 1. Mean scores also tended to increase across grade levels. However, both within-grade and cross-grade growth became less pronounced in the higher grades, particularly from grade 2 to grade 3. This pattern suggests that many older students had already developed stronger foundational skills or were approaching the upper end of the scale. Year-to-year differences were generally modest, suggesting that student performance patterns were broadly stable across the 2022/23, 2023/24, and 2024/25 norming years.

Table 3.1. Descriptive Statistics of Test Scores in the Norming Sample

Year	Grade	Stat	Phonological Awareness			Phonics & Word Recognition			Language Comprehension		
			Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
2022/23	K	Mean	490.1	494.5	498.4	489.0	493.7	497.8	492.1	496.1	499.4
		SD	7.8	8.3	9.0	4.9	6.6	7.8	7.6	8.9	9.5
		N	11,921	13,502	15,532	11,921	13,502	15,532	11,921	13,502	15,532
	1	Mean	497.6	501.9	504.1	497.4	501.6	503.7	498.4	502.5	504.4
		SD	8.8	9.4	9.8	8.0	8.1	7.8	9.2	9.7	9.9
		N	14,523	17,576	12,618	14,523	17,576	12,618	14,523	17,576	12,618
	2	Mean	502.5	504.8	505.9	503.0	504.5	505.1	502.5	504.7	505.5
		SD	9.4	9.5	10.0	7.8	7.6	7.4	9.2	9.8	10.0
		N	10,407	9,096	7,297	10,407	9,096	7,297	10,407	9,096	7,297
	3	Mean	504.1	505.5	505.6	504.0	504.6	504.2	503.3	504.5	504.4
		SD	9.5	9.5	10.1	7.0	7.0	7.1	9.4	10.1	10.5
		N	3,024	2,445	1,873	3,024	2,445	1,873	3,024	2,445	1,873
2023/24	K	Mean	490.5	494.7	498.6	489.5	493.6	497.9	493.3	496.6	500.3
		SD	8.0	8.2	9.1	5.0	6.4	7.8	8.3	9.0	9.6
		N	12,969	14,389	17,442	12,969	14,389	17,442	12,969	14,389	17,442
	1	Mean	498.7	501.9	502.2	498.3	501.3	501.1	500.1	503.0	503.1
		SD	9.0	9.7	9.2	8.2	8.2	7.6	9.8	9.8	9.9
		N	17,600	18,102	10,843	17,600	18,102	10,843	17,600	18,102	10,843
	2	Mean	503.2	502.2	502.9	503.3	501.3	501.5	503.8	503.2	503.7
		SD	9.6	9.3	9.5	7.9	7.3	7.2	10.1	9.9	10.3
		N	12,395	6,021	4,851	12,395	6,021	4,851	12,395	6,021	4,851
	3	Mean	505.1	504.1	504.6	504.9	502.4	502.0	504.6	503.9	504.3
		SD	9.3	10.0	9.9	7.2	7.5	7.5	10.0	10.0	11.1
		N	4,352	1,704	1,343	4,352	1,704	1,343	4,352	1,704	1,343

Year	Grade	Stat	Phonological Awareness			Phonics & Word Recognition			Language Comprehension		
			Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
2024/25	K	Mean	490.4	495.6	499.0	489.9	494.6	498.1	493.0	497.9	500.4
		SD	8.2	8.5	9.1	4.9	6.6	7.5	8.5	9.6	9.8
		N	10,689	7,720	14,092	10,689	7,720	14,092	10,689	7,720	14,092
	1	Mean	498.1	502.3	503.3	497.3	501.7	502.1	499.8	503.7	504.2
		SD	9.0	9.7	9.8	7.6	8.0	7.7	10.0	10.3	10.5
		N	13,908	10,989	9,686	13,908	10,989	9,686	13,908	10,989	9,686
	2	Mean	501.3	505.6	504.1	500.8	504.5	502.3	502.3	506.7	504.2
		SD	9.2	10.0	10.2	7.3	7.9	7.4	10.3	10.3	10.8
		N	7,916	7,426	4,457	7,916	7,426	4,457	7,916	7,426	4,457
	3	Mean	503.2	503.7	504.8	502.1	502.3	502.9	504.4	506.2	505.4
		SD	9.7	10.1	10.7	7.6	7.3	7.3	10.7	10.9	11.9
		N	2,469	1,037	1,348	2,469	1,037	1,348	2,469	1,037	1,348
Overall	K	Mean	490.3	494.8	498.6	489.5	493.9	497.9	492.8	496.7	500.0
		SD	8.0	8.3	9.0	4.9	6.5	7.7	8.1	9.1	9.6
		N	35,578	35,611	47,066	35,579	35,611	47,066	35,579	35,611	47,066
	1	Mean	498.2	502.0	503.3	497.7	501.5	502.4	499.5	503.0	503.9
		SD	9.0	9.6	9.7	8.0	8.1	7.8	9.7	9.9	10.1
		N	46,030	46,667	33,147	46,031	46,667	33,147	46,031	46,667	33,147
	2	Mean	502.5	504.4	504.6	502.6	503.6	503.3	503.0	505.0	504.6
		SD	9.4	9.7	10.0	7.8	7.7	7.5	9.9	10.1	10.3
		N	30,718	22,542	16,605	30,718	22,543	16,605	30,718	22,543	16,605
	3	Mean	504.3	504.7	505.1	503.9	503.4	503.2	504.2	504.6	504.7
		SD	9.5	9.8	10.2	7.4	7.3	7.3	10.0	10.3	11.1
		N	9,845	5,186	4,564	9,845	5,186	4,564	9,845	5,186	4,564

3.2. Pearson Correlation Coefficients

Table 3.2 presents the numbers of test events and the corresponding Pearson correlation coefficients of scores across different terms by domain and grade after listwise deletion (i.e., the calculation was conducted using only students who had scores in all three terms). These coefficients range between 0.34 and 0.58 for Phonological Awareness, 0.51 and 0.82 for Phonics & Word Recognition, and 0.57 and 0.74 for Language Comprehension. These results suggest that, in general, the scores across different terms were moderately correlated. In comparison, the magnitudes of the between-term correlations for Phonological Awareness are smaller than those for Phonics & Word Recognition and Language Comprehension. One possible explanation for the lower between-term correlations is that phonological awareness develops rapidly during the early stages of Spanish literacy acquisition. Given the transparent Spanish orthography, students typically acquire the alphabetic principles relatively quickly, resulting in more rapid changes in phonological awareness during the early grades. This accelerated development may alter students' relative standing over time, yielding lower between-term correlations than those observed for Phonics & Word Recognition and Language Comprehension.

Table 3.2. Pearson Correlation Coefficients (*r*) Among Fall, Winter, and Spring Scores

Domain	Grade	N	<i>r</i>		
			Fall, Winter	Winter, Spring	Fall, Spring
Phonological Awareness	K	26,067	0.38	0.51	0.34
	1	22,293	0.50	0.57	0.46
	2	9,538	0.51	0.57	0.49
	3	2,312	0.55	0.58	0.53
Phonics & Word Recognition	K	26,067	0.62	0.73	0.51
	1	22,294	0.74	0.77	0.63
	2	9,538	0.78	0.79	0.70
	3	2,312	0.80	0.82	0.74
Language Comprehension	K	26,067	0.60	0.69	0.57
	1	22,294	0.69	0.72	0.66
	2	9,538	0.70	0.71	0.67
	3	2,312	0.73	0.74	0.72

3.3. Normality Assumption

The reasonableness of the joint normality assumption of scores is important for inferences based on the multivariate true score models. As such, a series of measures and tools were employed to evaluate normality, such as Quantile-Quantile (Q-Q) plots, cumulative distribution function (CDF) curves for scores, and residuals from model estimation. Due to space limitation, this report only presents a series of graphs—including histograms, Q-Q plots, and CDF curves—based on Phonological Awareness scores (left panel of the figures) and residuals from model estimation (right panel of the figures) for grade K students in Figure 3.1, Figure 3.2, and Figure 3.3. Figure 3.4 presents the scatterplot matrix among fall, winter, and spring Phonological Awareness scores for grade K students. While the Q-Q plots indicate some deviations from the straight line at the tails, the figures suggest that normality assumptions of the model seem reasonable. The figures for other domains were similar to those for the Phonological Awareness scores for grade K. Overall, the model normality assumption was met for all domains and grades of interest in this norming study.

Figure 3.1. Histograms, Q-Q Plots, and CDF Curves for Phonological Awareness Scores—Grade K, Fall

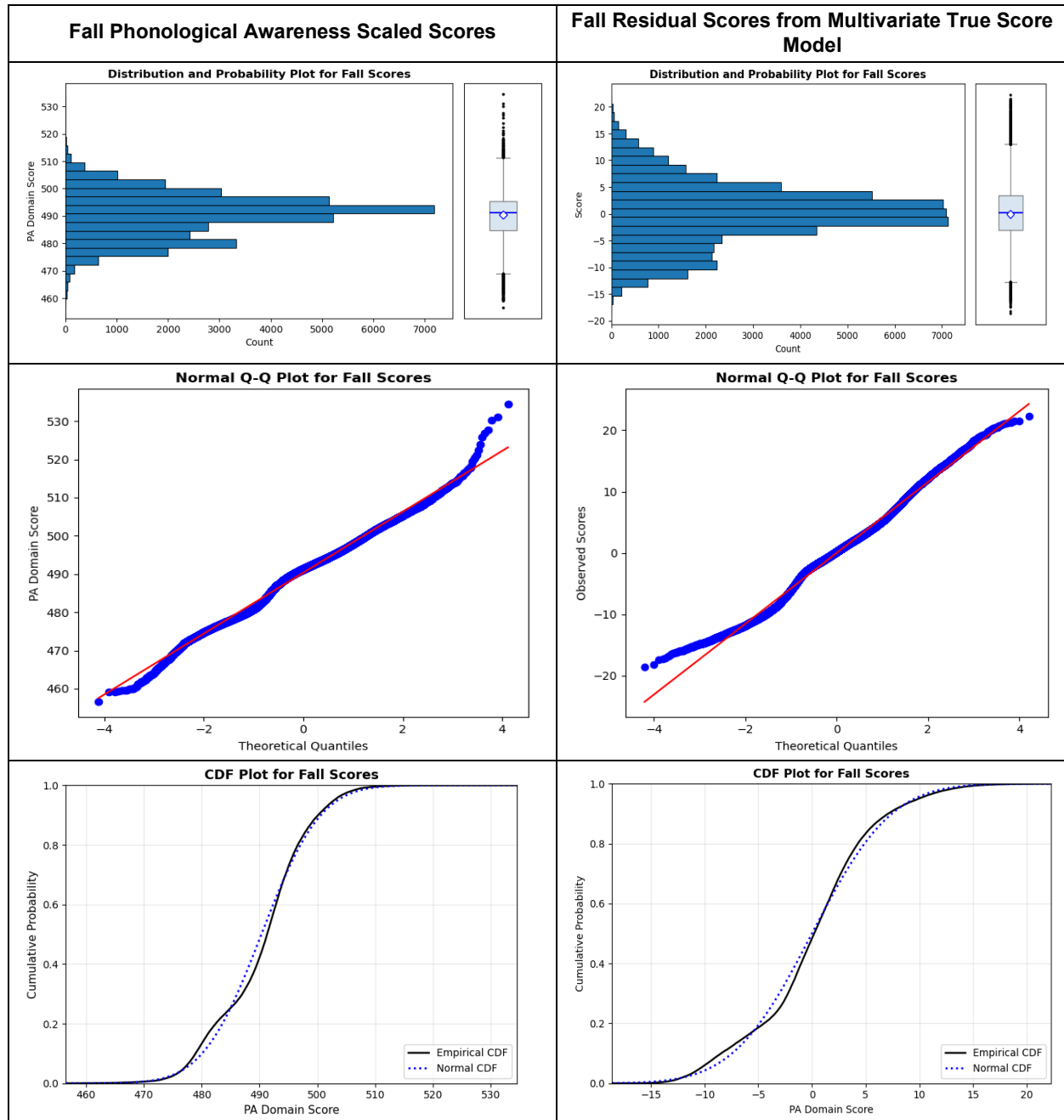


Figure 3.2. Histograms, Q-Q Plots, and CDF Curves for Phonological Awareness Scores—Grade K, Winter

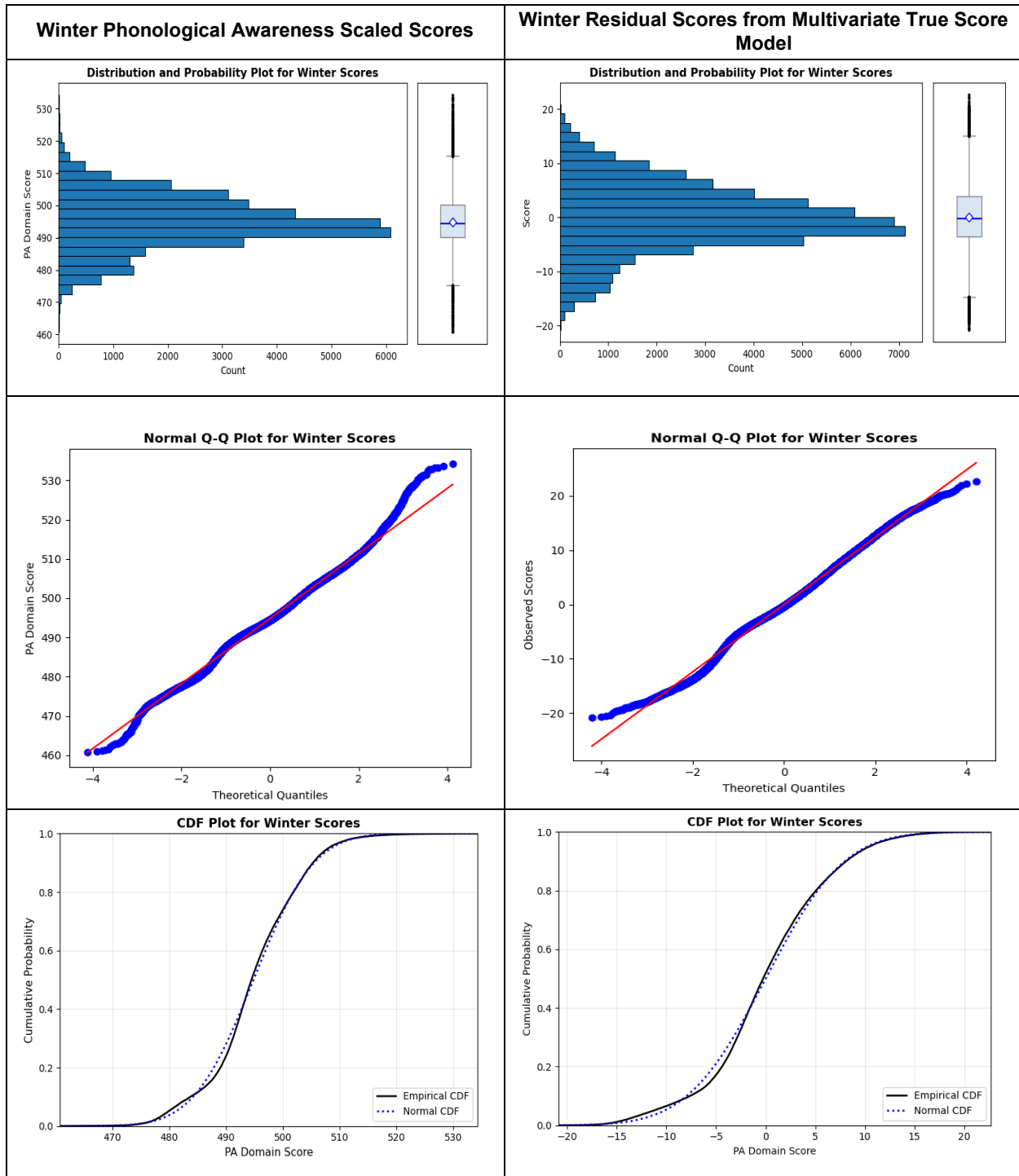


Figure 3.3. Histograms, Q-Q Plots, and CDF Curves for Phonological Awareness Scores—Grade K, Spring

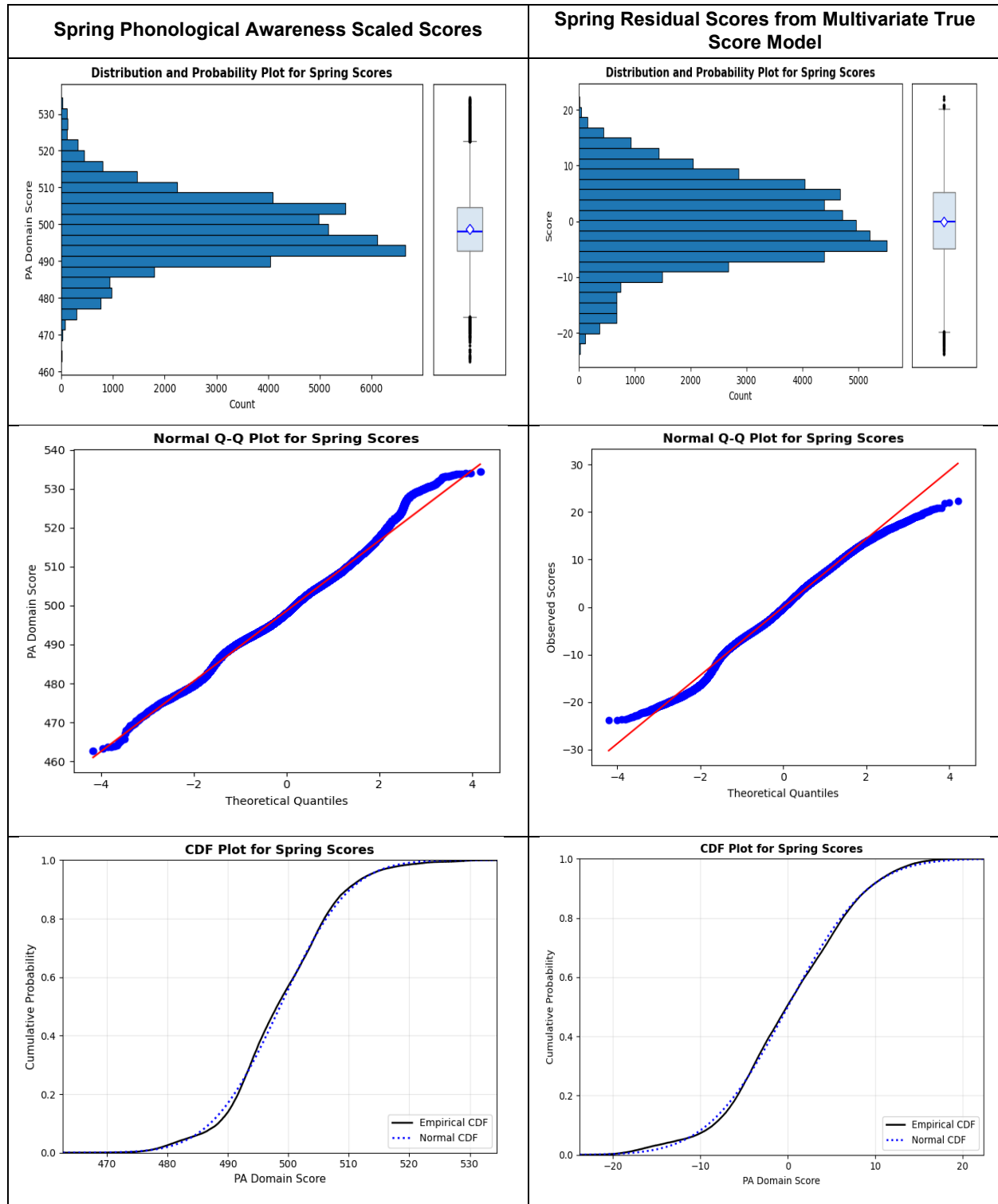
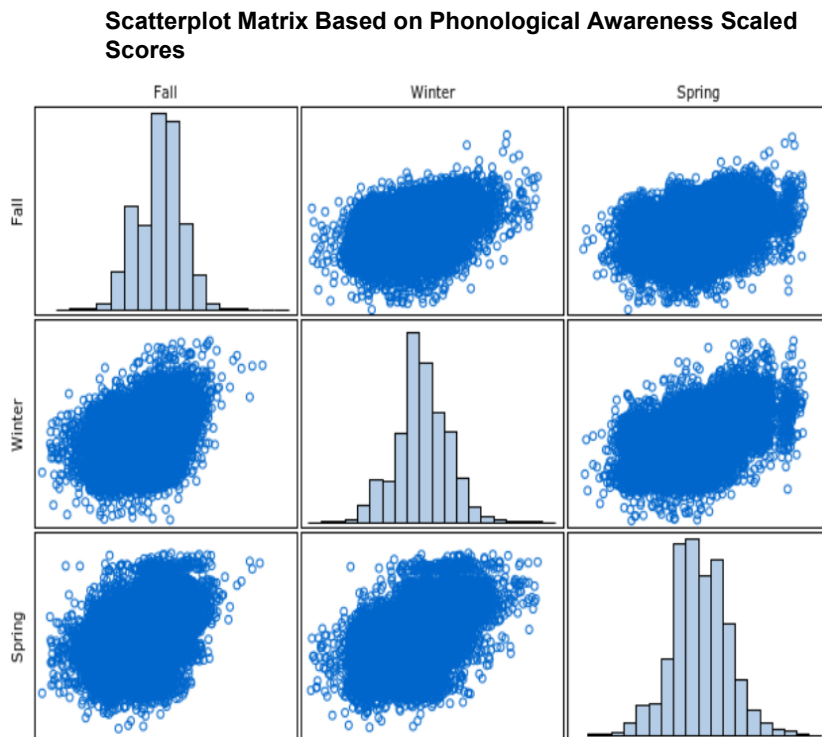
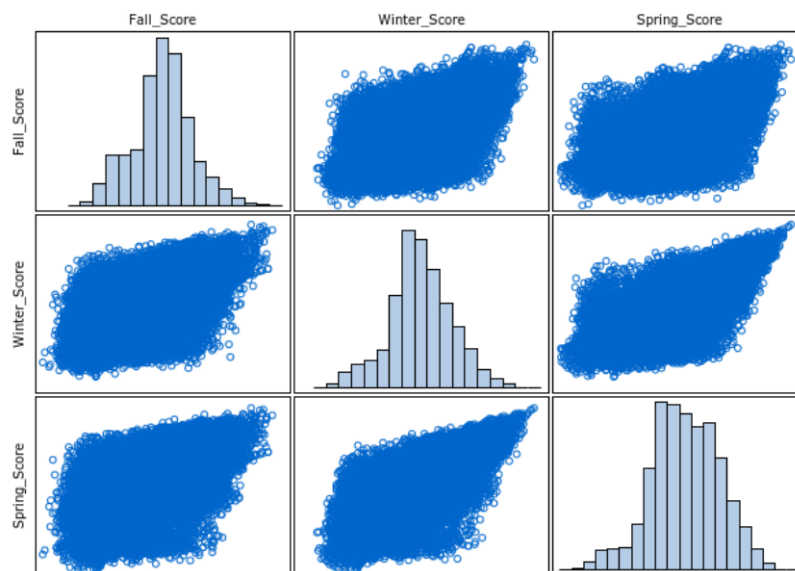


Figure 3.4. Scatterplot Matrix Among Fall, Winter, and Spring Phonological Awareness Scores—Grade K



Scatterplot Matrix Based on Multivariate True Score Model Residuals



3.4. Achievement and Growth Norms

Table 3.3–Table 3.14 present snapshots of the achievement and growth norms for each domain in grades K–3. Within each table, Panels A, B, and C present the achievement and between-term growth norms in a domain for the same grade. The tables can be interpreted as follows:

- The grey columns present percentile ranks ranging from 5 to 95 in increments of 5. For ease of presentation, only a select group of percentiles is provided. Users should refer to score reports for student-specific normative-referenced performance information.
- The blue columns present achievement norm scores for each term. They remain unchanged across panels within a table.
- The green columns present the expected between-term growth and corresponding standard deviation (SD) for each percentile rank. They differ across panels for fall-to-winter (Panel A), winter-to-spring (Panel B), and fall-to-spring (Panel C) growth.
- The yellow and mixed-colored cells provide a normative evaluation of the actual gain a student may have made between different terms.
 - The yellow cells indicate the corresponding winter or spring achievement norms and the corresponding percentiles.
 - The mixed-colored cells indicate the growth percentiles associated with specific between-term gains.

To illustrate how these tables can be interpreted, consider a hypothetical grade K student who scores 486, 491, and 496 in Language Comprehension in fall, winter, and spring, respectively. Based on the grey column in Table 3.3, these scores place this student at the 15th, 25th, and 30th percentiles in fall, winter, and spring, respectively. In other words, the student's performance exceeded that of 15%, 25%, and 30% of kindergarten students in the norming sample at the corresponding testing terms.

As mentioned above, the yellow and mixed-colored cells can be used to evaluate a student's growth relative to other students in the norming sample. In this example, the student has improved 5 points from fall to winter (i.e., 486 → 491). In Panel A, locating the intersection between the row where the achievement norm score in fall is 486 (in blue) and the column where the winter score is 491 (in yellow), this 5-point fall-to-winter gain places this student at the 61st percentile in the fall-to-winter growth scale (in mixed-color). In other words, this student's progress exceeds that of the 61% of other grade K students in the norming sample who also scored 486 in the fall (i.e., students in the 15th percentile). This gain is also above the expected fall-to-winter growth for students with a fall score of 486 (15th percentile). According to the green columns in Panel A, the expected gain is 4 points (SD = 4.4), whereas this student gained 5 points. Similar interpretations for winter-to-spring and fall-to-spring growth can be made based on Panel B and Panel C, respectively.

A

BCPage 16

Table 3.4. Snapshot of Norms—Language Comprehension, Grade 1

A

						Winter Percentile and Score																				
	Achievement Norm Score			Fall-Winter Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95		
Percentile	Fall	Winter	Spring	Mean	SD	489	492	494	496	497	498	499	500	501	502	503	504	505	507	508	509	511	513	516		
5	486	489	491	4.8	3.7	33	64	81	90	95	98	99	99	99	99	99	99	99	99	99	99	99	99	99		
10	489	492	494	4.5	3.7	12	36	56	72	83	90	94	97	98	99	99	99	99	99	99	99	99	99	99		
15	491	494	496	4.2	3.7	5	20	38	54	68	79	86	92	95	97	99	99	99	99	99	99	99	99	99		
20	492	496	497	4.1	3.7	3	14	29	45	59	71	81	87	92	96	98	99	99	99	99	99	99	99	99		
25	494	497	499	3.9	3.7	1	6	15	27	40	53	65	75	83	89	93	96	98	99	99	99	99	99	99		
30	495	498	500	3.8	3.7	1	4	10	20	31	44	56	67	76	84	90	94	97	98	99	99	99	99	99		
35	496	499	501	3.6	3.7	1	2	7	14	24	35	46	58	68	77	84	90	94	97	99	99	99	99	99		
40	497	500	502	3.5	3.7	1	1	4	9	17	26	37	48	59	69	78	85	91	95	98	99	99	99	99		
45	498	501	503	3.4	3.7	1	1	2	6	12	19	28	39	50	60	70	79	86	92	96	98	99	99	99		
50	499	502	505	3.3	3.7	1	1	1	4	8	13	21	30	40	51	62	72	81	88	93	97	99	99	99		
55	500	503	506	3.2	3.7	1	1	1	2	5	9	15	22	31	42	52	63	73	82	89	95	98	99	99		
60	501	504	507	3.0	3.7	1	1	1	1	3	6	10	16	23	33	43	54	65	75	84	92	96	99	99		
65	502	505	508	2.9	3.7	1	1	1	1	2	3	6	11	17	25	34	44	56	67	78	87	94	98	99		
70	503	507	509	2.8	3.7	1	1	1	1	1	2	4	7	12	18	26	35	46	58	70	82	91	97	99		
75	505	508	510	2.6	3.7	1	1	1	1	1	1	1	3	5	8	13	20	28	39	52	66	80	92	99		
80	506	509	512	2.4	3.7	1	1	1	1	1	1	1	1	3	5	9	14	21	31	43	57	73	87	97		
85	507	511	513	2.3	3.7	1	1	1	1	1	1	1	1	2	3	5	9	15	23	34	48	64	82	95		
90	509	513	515	2.1	3.7	1	1	1	1	1	1	1	1	1	1	2	4	6	11	19	30	46	66	89		
95	512	516	518	1.7	3.7	1	1	1	1	1	1	1	1	1	1	1	1	1	3	5	11	20	38	69		

B

						Spring Percentile and Score																			
	Achievement Norm Score			Winter-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	
Percentile	Fall	Winter	Spring	Mean	SD	491	494	496	497	499	500	501	502	503	505	506	507	508	509	510	512	513	515	518	
5	486	489	491	2.7	3.3	39	74	90	96	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	
10	489	492	494	2.6	3.3	12	41	65	81	91	96	98	99	99	99	99	99	99	99	99	99	99	99	99	
15	491	494	496	2.5	3.3	4	21	42	62	77	87	93	96	98	99	99	99	99	99	99	99	99	99	99	
20	492	496	497	2.4	3.3	1	8	22	39	56	70	81	89	94	97	99	99	99	99	99	99	99	99	99	
25	494	497	499	2.4	3.3	1	5	14	28	44	59	72	82	90	94	97	99	99	99	99	99	99	99	99	
30	495	498	500	2.3	3.3	1	2	9	19	33	48	62	74	83	90	95	97	99	99	99	99	99	99	99	
35	496	499	501	2.3	3.3	1	1	5	12	23	36	50	63	75	84	90	95	98	99	99	99	99	99	99	
40	497	500	502	2.3	3.3	1	1	3	7	15	26	39	52	65	76	85	91	95	98	99	99	99	99	99	
45	498	501	503	2.2	3.3	1	1	1	4	9	17	28	40	53	66	77	85	92	96	98	99	99	99	99	
50	499	502	505	2.2	3.3	1	1	1	2	5	11	19	30	42	54	67	78	86	93	97	99	99	99	99	
55	500	503	506	2.1	3.3	1	1	1	1	3	6	12	20	31	43	55	68	79	88	94	98	99	99	99	
60	501	504	507	2.1	3.3	1	1	1	1	1	4	7	13	21	32	44	57	69	81	89	95	99	99	99	
65	502	505	508	2.1	3.3	1	1	1	1	1	2	4	8	14	22	33	45	58	72	83	92	97	99	99	
70	503	507	509	2.0	3.3	1	1	1	1	1	1	1	2	5	9	15	24	35	49	64	79	90	97	99	
75	505	508	510	1.9	3.3	1	1	1	1	1	1	1	1	2	5	9	16	25	38	53	69	84	95	99	
80	506	509	512	1.9	3.3	1	1	1	1	1	1	1	1	1	3	5	10	17	27	41	58	76	91	99	
85	507	511	513	1.8	3.3	1	1	1	1	1	1	1	1	1	1	3	6	12	21	35	55	77	95	99	
90	509	513	515	1.7	3.3	1	1	1	1	1	1	1	1	1	1	1	1	2	4	8	17	32	56	86	
95	512	516	518	1.6	3.3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	9	24	58	

C

						Spring Percentile and Score																			
	Achievement Norm Score			Fall-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	
Percentile	Fall	Winter	Spring	Mean	SD	491	494	496	497	499	500	501	502	503	505	506	507	508	509	510	512	513	515	518	
5	486	489	491	6.9	4.4	31	58	75	85	91	95	97	99	99	99	99	99	99	99	99	99	99	99	99	
10	489	492	494	6.6	4.4	13	34	52	67	77	85	91	94	97	98	99	99	99	99	99	99	99	99	99	
15	491	494	496	6.4	4.4	7	21	37	51	64	74	82	88	92	95	97	98	99	99	99	99	99	99	99	
20	492	496	497	6.3	4.4	4	15	29	43	56	67	76	83	89	93	95	97	99	99	99	99	99	99	99	
25	494	497	499	6.0	4.4	2	8	17	28	40	51	62	71	79	85	90	94	96	98	99	99	99	99	99	
30	495	498	500	5.9	4.4	1	5	12	22	32	43	54	64	72	80	86	91	94	97	98	99	99	99	99	
35	496	499	501	5.8	4.4	1	3	9	16	25	35	46	56	65	74	81	87	91	95	97	99	99	99	99	
40	497	500	502	5.7	4.4	1	2	6	12	19	28	38	48	57	67	75	82	88	92	96	98	99	99	99	
45	498	501	503	5.6	4.4	1	1	4	8	14	22	30	40	49	59	68	76	83	89	94	97	99	99	99	
50	499	502	505	5.4	4.4	1	1	3	6	10	16	24	32	41	51	60	69	78	85	91	95	98	99	99	
55	500	503	506	5.3	4.4	1	1	2	4	7	12	18	25	34	43	52	62	71	80	87	92	96	99	99	
60	501	504	507	5.2	4.4	1	1	1	2	5	8	13	19	27	35	44	54	64	73	82	89	95	98	99	
65	502	505	508	5.1	4.4	1	1	1	1	3	6	9	14	20	28	37	46	56	66	76	85	92	97	99	
70	503	507	509	5.0	4.4	1	1	1	1	2	4	6	10	15	22	29	38	48	59	69	80	88	95	99	
75	505	508	510	4.7	4.4	1	1	1	1	1	1	3	5	8	12	17	24	32	43	54	66	79	90	98	
80	506	509	512	4.6	4.4	1	1	1	1	1	1	2	3	5	8	12	18	26	35	46	59	72	86	96	
85	507	511	513	4.5	4.4	1	1	1	1	1	1	1	2	3	6	9	13	20	28	38	51	65	80	94	
90	509	513	515	4.3	4.4	1	1	1	1	1	1	1	1	1	2	4	6	10	16	24	35	49	67	88	
95	512	516	518	3.9	4.4	1	1	1	1	1	1	1	1	1	1	1	2	3	5	9	16	27	44	71	

Table 3.5. Snapshot of Norms—Language Comprehension, Grade 2

A

						Winter Percentile and Score																					
	Achievement Norm Score			Fall-Winter Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95			
Percentile	Fall	Winter	Spring	Mean	SD	491	494	496	498	499	500	502	503	504	505	506	507	508	509	510	512	513	515	518			
5	489	491	492	3.5	3.8	39	69	85	93	96	98	99	99	99	99	99	99	99	99	99	99	99	99	99			
10	492	494	495	3.2	3.8	16	41	62	77	86	92	96	98	99	99	99	99	99	99	99	99	99	99	99			
15	494	496	497	3.0	3.8	7	24	43	60	73	82	89	94	96	98	99	99	99	99	99	99	99	99	99			
20	496	498	499	2.8	3.8	3	12	26	41	55	67	77	85	91	94	97	98	99	99	99	99	99	99	99			
25	497	499	500	2.7	3.8	1	8	19	32	46	58	70	79	86	91	95	97	99	99	99	99	99	99	99			
30	498	500	501	2.6	3.8	1	5	13	24	36	49	61	71	80	87	92	95	97	99	99	99	99	99	99			
35	500	502	502	2.4	3.8	1	2	5	12	20	31	42	53	64	73	82	88	93	96	98	99	99	99	99			
40	501	503	504	2.3	3.8	1	1	3	8	14	23	33	44	55	65	74	82	89	94	97	99	99	99	99			
45	502	504	505	2.2	3.8	1	1	2	5	10	16	25	34	45	56	66	76	84	90	95	98	99	99	99			
50	503	505	506	2.1	3.8	1	1	1	3	6	11	18	26	36	46	57	67	77	85	91	96	98	99	99			
55	504	506	507	2.0	3.8	1	1	1	2	4	7	12	19	27	37	48	58	69	79	87	93	97	99	99			
60	505	507	508	1.9	3.8	1	1	1	1	2	4	8	13	20	28	38	49	60	71	81	89	95	99	99			
65	506	508	509	1.8	3.8	1	1	1	1	1	3	5	9	14	21	29	39	51	63	74	84	92	98	99			
70	507	509	510	1.7	3.8	1	1	1	1	1	1	3	6	9	15	22	31	41	53	66	78	88	96	99			
75	508	510	511	1.6	3.8	1	1	1	1	1	1	2	3	6	10	15	23	32	44	56	70	83	93	99			
80	509	512	513	1.5	3.8	1	1	1	1	1	1	1	1	2	4	6	10	16	24	34	47	61	76	89			
85	511	513	514	1.3	3.8	1	1	1	1	1	1	1	1	1	2	4	7	12	19	29	42	59	77	94			
90	513	515	516	1.1	3.8	1	1	1	1	1	1	1	1	1	1	3	5	9	15	25	40	61	81	86			
95	516	518	519	1.0	3.8	1	1	1	1	1	1	1	1	1	1	1	1	1	2	4	8	17	33	63			

B

						Spring Percentile and Score																			
	Achievement Norm Score			Winter-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	
Percentile	Fall	Winter	Spring	Mean	SD	492	495	497	499	500	501	502	504	505	506	507	508	509	510	511	513	514	516	519	
5	489	491	492	2.1	3.6	39	71	87	94	98	99	99	99	99	99	99	99	99	99	99	99	99	99	99	
10	492	494	495	1.8	3.6	15	42	64	79	88	94	97	99	99	99	99	99	99	99	99	99	99	99	99	
15	494	496	497	1.6	3.6	6	24	44	62	75	85	91	95	97	99	99	99	99	99	99	99	99	99	99	
20	496	498	499	1.5	3.6	2	11	25	42	57	70	80	87	92	96	98	99	99	99	99	99	99	99	99	
25	497	499	500	1.4	3.6	1	7	18	32	47	60	72	81	88	93	96	98	99	99	99	99	99	99	99	
30	498	500	501	1.3	3.6	1	4	12	23	37	50	63	74	82	89	93	96	98	99	99	99	99	99	99	
35	500	502	502	1.2	3.6	1	1	5	11	20	31	43	55	66	76	84	90	94	97	99	99	99	99	99	
40	501	503	504	1.1	3.6	1	1	3	7	14	22	33	45	56	67	77	85	91	95	98	99	99	99	99	
45	502	504	505	1.0	3.6	1	1	1	4	9	16	24	35	46	58	69	78	86	92	96	98	99	99	99	
50	503	505	506	1.0	3.6	1	1	1	2	5	10	17	26	36	48	59	70	80	87	93	97	99	99	99	
55	504	506	507	1.0	3.6	1	1	1	1	3	6	11	18	27	38	49	61	72	81	89	95	98	99	99	
60	505	507	508	1.0	3.6	1	1	1	1	2	4	7	12	19	28	39	50	62	74	84	91	97	99	99	
65	506	508	509	1.0	3.6	1	1	1	1	1	2	4	8	13	20	30	40	52	65	77	87	94	98	99	
70	507	509	510	1.0	3.6	1	1	1	1	1	1	2	5	9	14	21	31	42	55	68	80	90	97	99	
75	508	510	511	1.0	3.6	1	1	1	1	1	1	1	3	5	9	15	23	33	45	59	73	85	95	99	
80	509	512	513	1.0	3.6	1	1	1	1	1	1	1	1	2	3	6	10	17	26	38	54	71	87	97	
85	511	513	514	1.0	3.6	1	1	1	1	1	1	1	1	1	2	4	6	11	19	29	44	61	80	95	
90	513	515	516	1.0	3.6	1	1	1	1	1	1	1	1	1	1	1	2	4	8	15	25	41	63	88	
95	516	518	519	1.0	3.6	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	8	16	34	66	

C

						Spring Percentile and Score																					
	Achievement Norm Score			Fall-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95			
Percentile	Fall	Winter	Spring	Mean	SD	492	495	497	499	500	501	502	504	505	506	507	508	509	510	511	513	514	516	519			
5	489	491	492	4.7	4.4	35	62	78	88	93	96	98	99	99	99	99	99	99	99	99	99	99	99	99			
10	492	494	495	4.3	4.4	16	39	57	71	81	87	92	95	97	98	99	99	99	99	99	99	99	99	99			
15	494	496	497	4.1	4.4	8	24	41	56	68	77	84	90	93	96	98	99	99	99	99	99	99	99	99			
20	496	498	499	3.9	4.4	4	14	26	40	52	63	73	80	86	91	94	97	98	99	99	99	99	99	99			
25	497	499	500	3.7	4.4	2	10	20	32	44	55	66	74	81	87	91	95	97	98	99	99	99	99	99			
30	498	500	501	3.6	4.4	1	7	15	25	36	47	58	67	76	82	88	92	95	97	99	99	99	99	99			
35	500	502	502	3.4	4.4	1	3	8	14	23	32	42	52	61	70	78	84	90	94	96	98	99	99	99			
40	501	503	504	3.3	4.4	1	2	5	10	17	25	34	44	53	63	71	79	85	91	95	97	99	99	99			
45	502	504	505	3.1	4.4	1	1	3	7	12	19	27	36	45	55	64	73	80	87	92	96	98	99	99			
50	503	505	506	3.0	4.4	1	1	2	5	9	14	21	29	38	47	56	66	74	82	88	94	97	99	99			
55	504	506	507	2.9	4.4	1	1	1	3	6	10	16	22	30	39	48	58	67	76	84	91	95	98	99			
60	505	507	508	2.8	4.4	1	1	1	2	4	7	11	17	24	31	40	50	60	70	79	87	93	97	99			
65	506	508	509	2.7	4.4	1	1	1	1	3	5	8	12	18	25	33	42	52	62	72	82	90	96	99			
70	507	509	510	2.6	4.4	1	1	1	1	2	3	5	9	13	19	26	34	44	54	65	76	86	94	99			
75	508	510	511	2.4	4.4	1	1	1	1	1	2	4	6	9	14	20	27	36	46	58	69	81	91	98			
80	509	512	513	2.3	4.4	1	1	1	1	1	1	2	4	6	10	15	21	29	38	50	62	75	87	97			
85	511	513	514	2.1	4.4	1	1	1	1	1	1	1	2	3	5	7	11	17	24	34	46	61	77	92			
90	513	515	516	1.8	4.4	1	1	1	1	1	1	1	1	1	2	3	5	9	14	21	31	45	63	85			
95	516	518	519	1.5	4.4	1	1	1	1	1	1	1	1	1	1	1	1	2	4	8	13	23	39	66			

Table 3.6. Snapshot of Norms—Language Comprehension, Grade 3

A

						Winter Percentile and Score																					
	Achievement Norm Score			Fall-Winter Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95			
Percentile	Fall	Winter	Spring	Mean	SD	491	494	496	498	499	500	501	502	504	505	506	507	508	509	510	511	513	515	518			
5	490	491	491	2.3	3.7	38	69	85	93	97	98	99	99	99	99	99	99	99	99	99	99	99	99	99			
10	493	494	494	2.0	3.7	15	41	62	77	86	92	96	98	99	99	99	99	99	99	99	99	99	99	99			
15	495	496	496	1.8	3.7	6	23	43	59	73	82	89	94	96	98	99	99	99	99	99	99	99	99	99			
20	497	498	498	1.6	3.7	2	11	25	40	55	67	77	85	91	94	97	98	99	99	99	99	99	99	99			
25	498	499	499	1.5	3.7	1	7	18	31	45	58	69	79	86	91	95	97	99	99	99	99	99	99	99			
30	499	500	501	1.4	3.7	1	5	12	23	36	48	60	71	80	87	92	95	97	99	99	99	99	99	99			
35	500	501	502	1.3	3.7	1	3	8	16	27	39	51	62	72	81	87	92	96	98	99	99	99	99	99			
40	502	502	503	1.2	3.7	1	1	3	7	14	22	32	43	54	65	74	82	89	94	97	99	99	99	99			
45	503	504	504	1.1	3.7	1	1	2	4	9	16	24	34	44	55	66	75	84	90	95	98	99	99	99			
50	504	505	505	1.0	3.7	1	1	1	3	6	10	17	25	35	46	57	67	77	85	91	96	99	99	99			
55	505	506	506	1.0	3.7	1	1	1	1	3	7	12	18	27	36	47	58	69	79	87	93	97	99	99			
60	506	507	508	1.0	3.7	1	1	1	1	2	4	8	13	19	28	37	48	60	71	81	89	95	99	99			
65	507	508	509	1.0	3.7	1	1	1	1	1	2	5	8	13	20	29	39	50	62	74	84	92	98	99			
70	508	509	510	1.0	3.7	1	1	1	1	1	1	3	5	9	14	21	30	41	53	65	78	88	96	99			
75	509	510	511	1.0	3.7	1	1	1	1	1	1	2	3	6	9	15	22	32	43	56	70	83	93	99			
80	510	511	513	1.0	3.7	1	1	1	1	1	1	1	2	3	6	10	16	23	34	46	61	76	89	98			
85	512	513	514	1.0	3.7	1	1	1	1	1	1	1	1	1	2	4	7	11	18	28	42	58	77	94			
90	514	515	517	1.0	3.7	1	1	1	1	1	1	1	1	1	1	2	5	8	14	24	39	60	86	99			
95	517	518	520	1.0	3.7	1	1	1	1	1	1	1	1	1	1	1	1	2	4	8	16	32	63	99			

B

						Spring Percentile and Score																					
	Achievement Norm Score			Winter-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95			
Percentile	Fall	Winter	Spring	Mean	SD	491	494	496	498	499	501	502	503	504	505	506	508	509	510	511	513	514	517	520			
5	490	491	491	1.3	3.9	36	68	85	93	97	99	99	99	99	99	99	99	99	99	99	99	99	99	99			
10	493	494	494	1.1	3.9	14	39	61	77	87	93	96	98	99	99	99	99	99	99	99	99	99	99	99			
15	495	496	496	1.1	3.9	6	22	41	59	73	83	90	94	97	98	99	99	99	99	99	99	99	99	99			
20	497	498	498	1.0	3.9	2	10	24	39	54	67	78	86	91	95	97	99	99	99	99	99	99	99	99			
25	498	499	499	1.0	3.9	1	6	17	30	44	58	70	79	87	92	95	98	99	99	99	99	99	99	99			
30	499	500	501	1.0	3.9	1	4	11	22	35	48	60	71	80	87	92	96	98	99	99	99	99	99	99			
35	500	501	502	1.0	3.9	1	2	7	15	26	38	51	62	73	81	88	93	96	98	99	99	99	99	99			
40	502	502	503	1.0	3.9	1	1	4	10	19	29	41	53	64	74	82	89	94	97	99	99	99	99	99			
45	503	504	504	1.0	3.9	1	1	1	4	8	15	23	33	44	56	67	76	85	91	95	98	99	99	99			
50	504	505	505	1.0	3.9	1	1	1	2	5	10	16	25	35	46	57	68	78	86	92	96	99	99	99			
55	505	506	506	1.0	3.9	1	1	1	1	3	6	11	18	26	36	47	59	70	80	88	94	98	99	99			
60	506	507	508	1.0	3.9	1	1	1	1	2	4	7	12	19	27	37	49	61	72	82	90	96	99	99			
65	507	508	509	1.0	3.9	1	1	1	1	1	2	4	8	13	20	29	39	51	63	75	85	93	98	99			
70	508	509	510	1.0	3.9	1	1	1	1	1	1	2	5	8	14	21	30	41	53	67	79	89	96	99			
75	509	510	511	1.0	3.9	1	1	1	1	1	1	1	3	5	9	14	22	32	44	57	71	84	94	99			
80	510	511	513	1.0	3.9	1	1	1	1	1	1	1	2	3	6	9	15	23	34	47	62	77	90	98			
85	512	513	514	1.0	3.9	1	1	1	1	1	1	1	1	1	2	4	6	11	18	29	43	60	79	95			
90	514	515	517	1.0	3.9	1	1	1	1	1	1	1	1	1	1	2	4	8	14	25	40	62	87	99			
95	517	518	520	1.0	3.9	1	1	1	1	1	1	1	1	1	1	1	1	2	4	8	16	33	65	99			

C

						Spring Percentile and Score																							
Percentile	Achievement Norm Score			Fall-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95					
	Fall	Winter	Spring	Mean	SD	491	494	496	498	499	501	502	503	504	505	506	508	509	510	511	513	514	517	520					
5	490	491	491	2.5	4.4	36	64	80	89	94	97	98	99	99	99	99	99	99	99	99	99	99	99	99					
10	493	494	494	2.3	4.4	16	39	58	72	82	89	93	96	98	99	99	99	99	99	99	99	99	99	99					
15	495	496	496	2.2	4.4	8	24	41	57	69	79	86	91	94	97	98	99	99	99	99	99	99	99	99					
20	497	498	498	2.1	4.4	3	13	26	40	53	64	74	82	88	92	95	97	99	99	99	99	99	99	99					
25	498	499	499	2.1	4.4	2	9	19	32	44	56	67	76	83	88	93	96	98	99	99	99	99	99	99					
30	499	500	501	2.0	4.4	1	6	14	24	36	47	58	68	77	84	89	93	96	98	99	99	99	99	99					
35	500	501	502	1.9	4.4	1	4	10	18	28	39	50	60	70	78	84	90	94	97	98	99	99	99	99					
40	502	502	503	1.8	4.4	1	1	4	9	16	24	33	43	53	63	72	80	86	92	95	98	99	99	99					
45	503	504	504	1.8	4.4	1	1	3	6	11	18	26	35	45	55	64	73	81	88	93	96	99	99	99					
50	504	505	505	1.7	4.4	1	1	2	4	8	13	19	27	36	46	56	66	75	83	89	94	98	99	99					
55	505	506	506	1.7	4.4	1	1	1	2	5	9	14	21	29	38	48	58	68	77	85	91	96	99	99					
60	506	507	508	1.6	4.4	1	1	1	1	3	6	10	15	22	30	39	49	60	70	79	88	94	98	99					
65	507	508	509	1.6	4.4	1	1	1	1	2	4	7	11	16	23	31	41	51	62	73	83	91	97	99					
70	508	509	510	1.5	4.4	1	1	1	1	1	2	4	7	11	17	24	33	43	54	65	76	87	94	99					
75	509	510	511	1.5	4.4	1	1	1	1	1	1	3	5	8	12	18	25	34	45	57	69	81	92	98					
80	510	511	513	1.4	4.4	1	1	1	1	1	1	2	3	5	8	13	19	27	37	48	61	75	88	97					
85	512	513	514	1.3	4.4	1	1	1	1	1	1	1	2	4	6	10	15	22	32	44	60	77	93						
90	514	515	517	1.2	4.4	1	1	1	1	1	1	1	1	1	1	2	4	7	12	18	28	43	62	85					
95	517	518	520	1.0	4.4	1	1	1	1	1	1	1	1	1	1	1	1	2	3	6	11	20	37	65					

Table 3.7. Snapshot of Norms—Phonological Awareness, Grade K

A

						Winter Percentile and Score																							
	Achievement Norm Score			Fall-Winter Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95					
Percentile	Fall	Winter	Spring	Mean	SD	482	485	487	488	490	491	492	493	494	495	496	496	497	498	500	501	502	504	507					
5	478	482	485	10.8	6.6	16	28	38	47	54	61	67	72	77	81	84	88	90	93	95	97	98	99	99					
10	481	485	488	9.2	6.6	12	22	31	39	46	53	59	64	70	74	79	83	86	89	92	95	97	98	99					
15	483	487	490	8.2	6.6	9	18	26	33	40	47	53	59	65	70	74	79	83	87	90	93	95	97	99					
20	484	488	492	7.6	6.6	8	16	24	31	38	44	50	56	62	67	72	77	81	85	89	92	95	97	99					
25	485	490	493	7.1	6.6	7	14	21	28	35	41	48	54	59	65	70	74	79	83	87	91	94	97	99					
30	486	491	494	6.6	6.6	6	13	19	26	32	39	45	51	56	62	67	72	77	81	86	89	93	96	98					
35	487	492	495	6.0	6.6	5	11	18	24	30	36	42	48	54	59	65	70	75	79	84	88	92	95	98					
40	488	493	496	5.5	6.6	5	10	16	22	28	33	39	45	51	56	62	67	72	77	82	87	91	95	98					
45	489	494	497	5.0	6.6	4	9	14	20	25	31	37	42	48	54	59	65	70	75	80	85	90	94	97					
50	490	495	498	4.4	6.6	3	8	13	18	23	29	34	40	45	51	56	62	67	73	78	83	88	93	97					
55	491	496	499	3.9	6.6	3	7	11	16	21	26	32	37	42	48	54	59	65	71	76	81	87	92	96					
60	492	496	500	3.4	6.6	3	6	10	14	19	24	29	34	40	45	51	57	62	68	74	80	85	91	96					
65	493	497	501	2.8	6.6	2	5	9	13	17	22	27	32	37	42	48	54	60	65	71	77	84	89	95					
70	494	498	503	2.3	6.6	2	5	8	11	15	20	24	29	34	40	45	51	57	63	69	75	82	88	94					
75	495	500	504	1.8	6.6	2	4	7	10	14	18	22	27	32	37	42	48	54	60	67	73	80	87	94					
80	496	501	505	1.2	6.6	1	3	6	9	12	16	20	25	29	34	40	45	51	57	64	71	78	85	93					
85	498	502	507	1.0	6.6	1	2	4	7	10	13	17	20	25	29	34	40	46	52	59	66	73	82	90					
90	500	504	509	1.0	6.6	1	2	3	5	8	10	13	17	21	25	29	35	40	46	53	60	68	78	88					
95	502	507	512	1.0	6.6	1	1	2	4	6	8	10	13	17	21	25	30	35	41	47	55	63	73	85					

B

						Spring Percentile and Score																						
	Achievement Norm Score			Winter-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95				
Percentile	Fall	Winter	Spring	Mean	SD	485	488	490	492	493	494	495	496	497	498	499	500	501	503	504	505	507	509	512				
5	478	482	485	8.4	6.5	21	36	48	58	65	72	78	82	86	89	92	94	96	97	98	99	99	99	99				
10	481	485	488	7.3	6.5	14	26	37	46	54	61	68	73	78	83	86	90	92	94	96	98	99	99	99				
15	483	487	490	6.6	6.5	10	20	29	38	46	54	60	67	72	77	82	85	89	92	94	96	98	99	99				
20	484	488	492	6.2	6.5	8	17	26	35	42	50	57	63	69	74	79	83	87	90	93	95	97	99	99				
25	485	490	493	5.5	6.5	6	13	20	28	35	42	49	55	62	67	73	78	82	86	90	93	96	98	99				
30	486	491	494	5.1	6.5	5	11	18	24	31	38	45	51	58	64	69	75	80	84	88	92	95	97	99				
35	487	492	495	4.8	6.5	4	9	15	22	28	35	41	48	54	60	66	71	77	82	86	90	94	97	99				
40	488	493	496	4.4	6.5	3	8	13	19	25	31	37	44	50	56	62	68	74	79	84	88	93	96	99				
45	489	494	497	4.0	6.5	2	6	11	16	22	28	34	40	46	52	58	64	70	76	81	86	91	95	98				
50	490	495	498	3.7	6.5	2	5	9	14	19	25	30	36	42	48	55	61	67	73	79	84	89	94	98				
55	491	496	499	3.3	6.5	2	4	8	12	17	22	27	33	38	44	51	57	63	70	76	82	87	93	97				
60	492	496	500	3.3	6.5	2	4	8	12	17	22	27	33	38	44	51	57	63	70	76	82	87	93	97				
65	493	497	501	2.9	6.5	1	3	6	10	14	19	24	29	35	41	47	53	60	66	73	79	85	91	96				
70	494	498	503	2.6	6.5	1	3	5	8	12	16	21	26	31	37	43	49	56	62	69	76	83	90	96				
75	495	500	504	1.8	6.5	1	2	4	6	9	12	16	20	25	30	35	41	48	55	62	70	77	85	93				
80	496	501	505	1.5	6.5	1	1	3	5	7	10	13	17	22	26	32	38	44	51	58	66	74	83	92				
85	498	502	507	1.1	6.5	1	1	2	4	6	8	11	15	19	23	28	34	40	47	54	62	71	81	91				
90	500	504	509	1.0	6.5	1	1	1	3	4	6	8	11	14	18	22	27	33	39	47	55	64	75	87				
95	502	507	512	1.0	6.5	1	1	1	1	2	3	5	6	9	11	14	18	23	29	35	43	53	64	79				

C

						Spring Percentile and Score																						
	Achievement Norm Score			Fall-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95				
Percentile	Fall	Winter	Spring	Mean	SD	485	488	490	492	493	494	495	496	497	498	499	500	501	503	504	505	507	509	512				
5	478	482	485	14.8	7.3	15	26	36	44	51	58	64	69	74	78	82	85	88	91	94	96	97	99	99				
10	481	485	488	13.1	7.3	11	21	29	37	44	50	56	62	67	72	76	81	84	88	91	93	96	98	99				
15	483	487	490	12.1	7.3	9	17	25	32	39	45	51	57	63	68	72	77	81	85	89	92	95	97	99				
20	484	488	492	11.5	7.3	8	16	23	30	36	43	49	55	60	65	70	75	79	83	87	91	94	96	99				
25	485	490	493	11.0	7.3	7	14	21	28	34	40	46	52	58	63	68	73	78	82	86	90	93	96	98				
30	486	491	494	10.4	7.3	6	13	19	26	32	38	44	50	55	61	66	71	76	80	84	88	92	95	98				
35	487	492	495	9.9	7.3	6	12	18	24	30	36	41	47	53	58	64	69	74	78	83	87	91	95	98				
40	488	493	496	9.3	7.3	5	10	16	22	28	33	39	45	50	56	61	66	71	76	81	86	90	94	97				
45	489	494	497	8.8	7.3	4	9	15	20	25	31	37	42	48	53	59	64	69	74	79	84	89	93	97				
50	490	495	498	8.3	7.3	4	8	13	18	24	29	34	40	45	51	56	62	67	72	78	83	88	92	97				
55	491	496	499	7.7	7.3	3	7	12	17	22	27	32	37	43	48	54	59	65	70	76	81	86	91	96				
60	492	496	500	7.2	7.3	3	7	11	15	20	25	30	35	40	46	51	57	62	68	74	79	85	90	96				
65	493	497	501	6.6	7.3	2	6	10	14	18	23	28	33	38	43	49	54	60	66	72	78	83	89	95				
70	494	498	503	6.1	7.3	2	5	9	12	17	21	26	30	36	41	46	52	58	63	69	76	82	88	94				
75	495	500	504	5.5	7.3	2	4	8	11	15	19	24	28	33	38	44	49	55	61	67	74	80	87	94				
80	496	501	505	5.0	7.3	2	4	7	10	14	18	22	26	31	36	41	47	53	59	65	71	78	85	93				
85	498	502	507	3.9	7.3	1	3	5	8	11	14	18	22	27	31	37	42	48	54	60	67	74	82	91				
90	500	504	509	2.8	7.3	1	2	4	6	9	12	15	19	23	27	32	37	43	49	55	62	70	79	88				
95	502	507	512	1.7	7.3	1	2	3	5	7	10	12	16	19	23	28	32	38	44	50	58	66	75	86				

Table 3.8. Snapshot of Norms—Phonological Awareness, Grade 1

A

Percentile	Achievement Norm Score			Fall-Winter Cond. Growth		Winter Percentile and Score																					
	Fall	Winter	Spring	Mean	SD	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95			
5	485	488	490	8.4	6.7	20	35	47	57	65	71	77	82	86	89	92	93	94	96	97	98	99	99	99	99		
10	488	491	493	7.3	6.7	13	25	36	45	54	61	68	73	78	83	86	90	92	95	96	98	99	99	99	99		
15	490	493	495	6.6	6.7	9	19	29	38	46	54	60	67	72	77	82	86	89	92	94	96	98	99	99	99		
20	491	495	497	6.3	6.7	8	17	26	34	42	50	57	63	69	74	79	83	87	91	93	96	97	99	99	99		
25	492	496	498	5.9	6.7	7	15	23	31	39	46	53	59	66	71	76	81	85	89	92	95	97	99	99	99		
30	494	497	499	5.2	6.7	5	11	18	25	32	39	45	52	58	64	70	75	80	85	89	92	95	98	99	99		
35	495	498	501	4.8	6.7	4	9	15	22	28	35	42	48	55	61	67	72	77	82	87	91	94	97	99	99		
40	496	499	502	4.5	6.7	3	8	13	19	25	31	38	44	51	57	63	69	75	80	85	89	93	96	99	99		
45	497	501	503	4.1	6.7	2	6	11	16	22	28	34	41	47	53	59	65	71	77	82	87	92	95	98	99		
50	498	502	504	3.7	6.7	2	5	9	14	19	25	31	37	43	49	56	62	68	74	80	85	90	94	98	99		
55	499	503	505	3.4	6.7	2	4	8	12	17	22	28	33	39	46	52	58	65	71	77	83	88	93	98	99		
60	500	504	506	3.0	6.7	1	4	7	10	15	19	25	30	36	42	48	54	61	67	74	80	86	92	97	99		
65	501	505	507	2.7	6.7	1	3	6	9	13	17	22	27	32	38	44	51	57	64	71	78	84	90	96	99		
70	502	506	508	2.3	6.7	1	2	5	7	11	15	19	24	29	35	41	47	53	60	67	75	82	89	95	99		
75	503	507	510	1.9	6.7	1	2	4	6	9	13	17	21	26	31	37	43	50	57	64	71	79	87	94	99		
80	505	509	511	1.2	6.7	1	1	2	4	6	9	12	16	20	25	30	36	42	49	57	65	73	82	92	99		
85	506	510	513	1.0	6.7	1	1	2	3	5	8	10	14	18	22	27	32	38	45	53	61	70	80	90	99		
90	508	512	515	1.0	6.7	1	1	1	2	4	5	7	10	13	17	21	26	31	38	45	54	63	74	86	99		
95	511	516	518	1.0	6.7	1	1	1	1	2	3	4	6	8	11	14	18	22	28	34	42	52	64	79	99		

B

						Spring Percentile and Score																					
	Achievement Norm Score			Winter-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95			
Percentile	Fall	Winter	Spring	Mean	SD	490	493	495	497	498	499	501	502	503	504	505	506	507	508	510	511	513	515	518			
5	485	488	490	6.7	6.4	22	39	52	62	70	77	82	86	90	92	95	96	97	98	99	99	99	99	99			
10	488	491	493	5.7	6.4	14	28	39	50	59	66	73	78	83	87	90	93	95	97	98	99	99	99	99			
15	490	493	495	5.0	6.4	10	21	32	41	50	58	65	71	77	82	86	89	92	95	96	98	99	99	99			
20	491	495	497	4.4	6.4	7	16	25	33	42	50	57	64	70	76	81	85	89	92	95	97	98	99	99			
25	492	496	498	4.1	6.4	5	13	21	30	38	46	53	60	66	72	78	82	87	90	93	96	98	99	99			
30	494	497	499	3.7	6.4	4	11	19	26	34	42	49	56	63	69	74	80	84	88	92	95	97	99	99			
35	495	498	501	3.4	6.4	4	9	16	23	30	38	45	52	58	65	71	76	82	86	90	93	96	98	99			
40	496	499	502	3.1	6.4	3	8	13	20	27	34	41	48	54	61	67	73	79	84	88	92	95	98	99			
45	497	501	503	2.4	6.4	2	5	9	15	20	26	33	39	46	53	59	66	72	78	83	88	93	96	99			
50	498	502	504	2.1	6.4	1	4	8	12	17	23	29	35	42	49	55	62	68	75	81	86	91	95	98			
55	499	503	505	1.8	6.4	1	3	6	10	15	20	26	32	38	44	51	58	65	71	78	84	89	94	98			
60	500	504	506	1.4	6.4	1	3	5	9	13	17	22	28	34	40	47	54	61	67	74	81	87	93	97			
65	501	505	507	1.1	6.4	1	2	4	7	11	15	19	25	30	36	43	49	56	64	71	78	85	91	97			
70	502	506	508	1.0	6.4	1	2	3	6	9	12	17	21	27	32	39	45	52	60	67	75	82	90	96			
75	503	507	510	1.0	6.4	1	1	3	5	7	10	14	18	23	29	35	41	48	56	63	71	79	88	95			
80	505	509	511	1.0	6.4	1	1	2	3	5	7	10	13	17	22	27	33	40	47	55	64	73	83	92			
85	506	510	513	1.0	6.4	1	1	1	2	4	6	8	11	15	19	24	30	36	43	51	60	69	80	91			
90	508	512	515	1.0	6.4	1	1	1	1	2	4	6	8	11	14	18	23	28	35	43	52	62	73	87			
95	511	516	518	1.0	6.4	1	1	1	1	1	1	2	3	5	7	9	12	16	21	27	35	45	58	76			

C

						Spring Percentile and Score																					
Percentile	Achievement Norm Score			Fall-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95			
	Fall	Winter	Spring	Mean	SD	490	493	495	497	498	499	501	502	503	504	505	506	507	508	510	511	513	515	518			
5	485	488	490	11.3	7.2	18	32	43	52	60	67	72	77	82	85	89	91	94	95	97	98	99	99	99			
10	488	491	493	10.0	7.2	12	24	33	42	50	57	64	69	75	79	83	87	90	92	95	97	98	99	99			
15	490	493	495	9.2	7.2	9	19	28	36	44	51	57	63	69	74	79	83	87	90	93	95	97	99	99			
20	491	495	497	8.8	7.2	8	17	25	33	40	47	54	60	66	71	76	81	85	88	91	94	96	98	99			
25	492	496	498	8.4	7.2	7	15	22	30	37	44	51	57	63	68	74	78	83	87	90	93	96	98	99			
30	494	497	499	7.6	7.2	5	11	18	25	31	38	44	51	57	62	68	73	78	83	87	91	94	97	99			
35	495	498	501	7.2	7.2	4	10	16	22	28	35	41	47	53	59	65	70	76	81	85	89	93	96	99			
40	496	499	502	6.8	7.2	4	8	14	20	26	32	38	44	50	56	62	68	73	78	83	88	92	95	98			
45	497	501	503	6.4	7.2	3	7	12	17	23	29	35	41	47	53	59	65	70	76	81	86	90	95	98			
50	498	502	504	5.9	7.2	2	6	11	15	21	26	32	38	44	49	55	61	67	73	79	84	89	94	97			
55	499	503	505	5.5	7.2	2	5	9	14	18	24	29	35	40	46	52	58	64	70	76	82	87	92	97			
60	500	504	506	5.1	7.2	2	4	8	12	16	21	26	32	37	43	49	55	61	67	74	80	86	91	96			
65	501	505	507	4.7	7.2	1	4	7	10	14	19	24	29	34	40	46	52	58	64	71	77	84	90	96			
70	502	506	508	4.3	7.2	1	3	6	9	13	17	21	26	31	37	42	48	55	61	68	75	82	88	95			
75	503	507	510	3.9	7.2	1	3	5	8	11	15	19	23	28	34	39	45	51	58	65	72	79	87	94			
80	505	509	511	3.1	7.2	1	2	3	6	8	11	15	19	23	28	33	39	45	52	59	66	74	83	92			
85	506	510	513	2.7	7.2	1	1	3	5	7	10	13	17	21	25	30	36	42	48	55	63	72	81	90			
90	508	512	515	1.8	7.2	1	1	2	3	5	7	10	13	17	21	25	30	35	42	49	57	66	76	87			
95	511	516	518	1.0	7.2	1	1	1	2	3	4	6	8	11	14	18	22	27	32	39	47	56	67	81			

Table 3.9. Snapshot of Norms—Phonological Awareness, Grade 2

A

						Winter Percentile and Score																									
	Achievement Norm Score			Fall-Winter Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95							
Percentile	Fall	Winter	Spring	Mean	SD	490	494	496	497	499	500	501	502	503	504	505	506	508	509	510	511	513	515	517							
5	489	490	491	7.3	6.7	19	34	46	56	64	71	76	81	85	89	91	94	95	97	98	99	99	99	99							
10	491	494	494	6.5	6.7	15	28	39	48	57	64	70	76	81	85	88	91	93	95	97	98	99	99	99							
15	494	496	496	5.4	6.7	9	19	29	38	46	53	60	66	72	77	82	86	89	92	94	96	98	99	99							
20	495	497	498	5.0	6.7	8	17	26	34	42	50	57	63	69	74	79	83	87	90	93	96	97	99	99							
25	496	499	499	4.6	6.7	7	15	23	31	39	46	53	59	65	71	76	81	85	89	92	95	97	99	99							
30	498	500	501	3.8	6.7	5	11	18	25	32	39	46	52	58	64	70	75	80	85	89	92	95	98	99							
35	499	501	502	3.5	6.7	4	9	15	22	29	35	42	48	55	61	67	72	78	83	87	91	94	97	99							
40	500	502	503	3.1	6.7	3	8	13	19	26	32	38	45	51	57	63	69	75	80	85	89	93	96	99							
45	501	503	504	2.7	6.7	2	7	11	17	23	29	35	41	48	54	60	66	72	77	83	88	92	96	98							
50	502	504	505	2.3	6.7	2	5	10	15	20	26	32	38	44	50	56	63	69	75	80	86	90	95	98							
55	503	505	507	1.9	6.7	2	5	8	13	17	23	28	34	40	46	53	59	65	72	78	83	89	94	98							
60	504	506	508	1.6	6.7	1	4	7	11	15	20	25	31	37	43	49	55	62	68	75	81	87	92	97							
65	505	508	509	1.2	6.7	1	3	6	9	13	18	22	28	33	39	45	52	58	65	72	78	85	91	96							
70	506	509	510	1.0	6.7	1	2	5	8	11	15	20	25	30	36	42	48	55	61	68	75	82	89	96							
75	508	510	511	1.0	6.7	1	2	3	5	8	11	15	19	24	29	35	41	47	54	62	69	77	85	94							
80	509	511	513	1.0	6.7	1	1	3	5	7	10	13	17	21	26	31	37	44	51	58	66	74	83	92							
85	511	513	514	1.0	6.7	1	1	2	3	5	7	10	13	16	20	25	31	37	43	51	59	68	78	89							
90	513	515	517	1.0	6.7	1	1	1	2	3	5	7	9	12	16	20	24	30	36	43	52	61	72	85							
95	516	518	520	1.0	6.7	1	1	1	1	2	3	4	5	7	10	13	17	21	26	33	41	50	63	78							

B

						Spring Percentile and Score																							
	Achievement Norm Score			Winter-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95					
Percentile	Fall	Winter	Spring	Mean	SD	491	494	496	498	499	501	502	503	504	505	507	508	509	510	511	513	514	517	520					
5	489	490	491	5.7	6.7	24	41	53	63	71	78	83	87	90	93	95	96	97	98	99	99	99	99	99					
10	491	494	494	4.4	6.7	13	26	38	47	56	64	70	76	81	85	89	92	94	96	97	98	99	99	99					
15	494	496	496	3.8	6.7	9	20	30	40	48	56	63	69	75	80	84	88	91	94	96	97	99	99	99					
20	495	497	498	3.5	6.7	8	17	27	36	44	52	59	66	72	77	82	86	89	92	95	97	98	99	99					
25	496	499	499	2.8	6.7	5	13	21	29	36	44	51	58	65	70	76	81	85	89	92	95	97	99	99					
30	498	500	501	2.5	6.7	4	11	18	25	33	40	47	54	61	67	73	78	83	87	91	94	96	98	99					
35	499	501	502	2.2	6.7	3	9	15	22	29	36	43	50	57	63	69	75	80	85	89	93	96	98	99					
40	500	502	503	1.8	6.7	3	7	13	19	26	33	39	46	53	59	66	72	77	82	87	91	95	97	99					
45	501	503	504	1.5	6.7	2	6	11	17	23	29	36	42	49	55	62	68	74	80	85	89	93	97	99					
50	502	504	505	1.2	6.7	2	5	9	14	20	26	32	38	45	51	58	64	71	77	82	87	92	96	99					
55	503	505	507	1.0	6.7	1	4	8	12	17	23	28	35	41	47	54	61	67	73	79	85	90	95	98					
60	504	506	508	1.0	6.7	1	3	6	10	15	20	25	31	37	43	50	57	63	70	76	83	88	94	98					
65	505	508	509	1.0	6.7	1	2	4	7	11	15	19	24	30	36	42	49	55	63	70	77	84	91	96					
70	506	509	510	1.0	6.7	1	2	3	6	9	12	16	21	26	32	38	45	51	59	66	74	81	89	95					
75	508	510	511	1.0	6.7	1	1	3	5	7	10	14	18	23	28	34	41	47	55	62	70	79	87	94					
80	509	511	513	1.0	6.7	1	1	2	4	6	9	12	16	20	25	31	37	43	51	59	67	75	84	93					
85	511	513	514	1.0	6.7	1	1	1	2	4	6	8	11	15	19	24	29	36	43	51	59	69	79	90					
90	513	515	517	1.0	6.7	1	1	1	2	3	4	6	8	11	14	18	23	29	35	43	51	61	73	86					
95	516	518	520	1.0	6.7	1	1	1	1	1	2	3	4	6	8	11	15	19	25	31	39	49	62	78					

C

						Spring Percentile and Score																							
Percentile	Achievement Norm Score			Fall-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95					
	Fall	Winter	Spring	Mean	SD	491	494	496	498	499	501	502	503	504	505	507	508	509	510	511	513	514	517	520					
5	489	490	491	8.7	7.3	18	31	42	52	60	66	72	77	82	85	89	91	93	95	97	98	99	99	99					
10	491	494	494	7.9	7.3	14	26	36	45	53	60	67	72	77	81	85	88	91	94	96	97	98	99	99					
15	494	496	496	6.7	7.3	9	19	28	36	44	51	57	63	69	74	79	83	87	90	93	95	97	99	99					
20	495	497	498	6.3	7.3	8	17	25	33	40	48	54	60	66	71	76	81	85	88	92	94	97	98	99					
25	496	499	499	5.9	7.3	7	15	22	30	37	44	51	57	63	69	74	79	83	87	90	93	96	98	99					
30	498	500	501	5.0	7.3	5	11	18	25	31	38	45	51	57	63	68	74	78	83	87	91	94	97	99					
35	499	501	502	4.6	7.3	4	10	16	22	29	35	41	48	54	60	65	71	76	81	85	90	93	96	99					
40	500	502	503	4.2	7.3	4	9	14	20	26	32	38	44	51	56	62	68	73	79	83	88	92	96	98					
45	501	503	504	3.8	7.3	3	7	12	18	23	29	35	41	47	53	59	65	71	76	81	86	91	95	98					
50	502	504	505	3.4	7.3	2	6	11	16	21	27	32	38	44	50	56	62	68	74	79	84	89	94	98					
55	503	505	507	3.0	7.3	2	5	9	14	19	24	29	35	41	47	53	59	65	71	77	82	88	93	97					
60	504	506	508	2.6	7.3	2	5	8	12	17	22	27	32	38	44	50	56	62	68	74	80	86	92	97					
65	505	508	509	2.2	7.3	1	4	7	11	15	19	24	29	35	41	46	53	59	65	72	78	84	90	96					
70	506	509	510	1.7	7.3	1	3	6	9	13	17	22	27	32	37	43	49	56	62	69	75	82	89	95					
75	508	510	511	1.0	7.3	1	2	4	7	10	13	17	22	26	32	37	43	49	56	63	70	78	85	93					
80	509	511	513	1.0	7.3	1	2	4	6	9	12	15	19	24	29	34	40	46	53	60	67	75	84	92					
85	511	513	514	1.0	7.3	1	1	3	4	6	9	12	15	19	24	28	34	40	46	53	61	70	79	89					
90	513	515	517	1.0	7.3	1	1	2	3	5	7	9	12	15	19	23	28	34	40	47	55	64	74	86					
95	516	518	520	1.0	7.3	1	1	1	2	3	4	6	8	10	13	17	21	25	31	38	45	55	66	80					

Table 3.10. Snapshot of Norms—Phonological Awareness, Grade 3

A

						Winter Percentile and Score																			
	Achievement Norm Score			Fall-Winter Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	
Percentile	Fall	Winter	Spring	Mean	SD	491	494	496	498	499	500	502	503	504	505	506	507	508	509	511	512	514	516	519	
5	490	491	491	6.2	6.7	21	37	49	59	67	74	79	84	87	90	93	95	96	98	98	99	99	99	99	
10	493	494	494	5.1	6.7	14	27	38	48	56	64	70	75	80	84	88	91	93	95	97	98	99	99	99	
15	495	496	496	4.4	6.7	10	21	31	40	49	56	63	69	75	79	84	87	91	93	95	97	98	99	99	
20	497	498	498	3.7	6.7	7	16	25	33	41	49	56	62	68	74	79	83	87	90	93	96	97	99	99	
25	498	499	500	3.3	6.7	6	14	22	30	38	45	52	59	65	70	76	81	85	89	92	95	97	99	99	
30	499	500	501	2.9	6.7	5	12	19	27	34	41	48	55	61	67	73	78	82	87	90	94	96	98	99	
35	500	502	502	2.6	6.7	4	10	17	24	31	38	44	51	58	64	69	75	80	85	89	92	95	98	99	
40	502	503	503	1.8	6.7	3	7	12	18	24	31	37	44	50	56	63	68	74	80	85	89	93	96	99	
45	503	504	505	1.5	6.7	2	6	11	16	21	27	34	40	46	53	59	65	71	77	82	87	92	96	98	
50	504	505	506	1.1	6.7	2	5	9	14	19	24	30	36	42	49	55	61	68	74	80	85	90	95	98	
55	505	506	507	1.0	6.7	1	4	8	12	16	21	27	33	39	45	51	58	64	71	77	83	88	93	98	
60	506	507	508	1.0	6.7	1	3	6	10	14	19	24	29	35	41	48	54	61	67	74	80	86	92	97	
65	507	508	509	1.0	6.7	1	3	5	8	12	16	21	26	32	38	44	50	57	64	71	77	84	91	96	
70	508	509	511	1.0	6.7	1	2	4	7	10	14	18	23	29	34	40	47	53	60	67	75	82	89	95	
75	509	511	512	1.0	6.7	1	2	3	6	9	12	16	20	25	31	37	43	49	56	64	71	79	87	94	
80	511	512	514	1.0	6.7	1	1	2	4	6	9	12	16	20	24	30	36	42	49	57	65	73	83	92	
85	512	514	515	1.0	6.7	1	1	2	3	5	7	10	13	17	22	27	32	38	45	53	61	70	80	90	
90	514	516	518	1.0	6.7	1	1	1	2	3	5	7	10	13	16	21	26	31	38	45	54	63	74	87	
95	517	519	521	1.0	6.7	1	1	1	1	2	3	4	6	8	10	14	17	22	28	34	42	52	64	80	

B

						Spring Percentile and Score																							
	Achievement Norm Score			Winter-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95					
Percentile	Fall	Winter	Spring	Mean	SD	491	494	496	498	500	501	502	503	505	506	507	508	509	511	512	514	515	518	521					
5	490	491	491	4.8	7.0	23	39	52	62	70	77	82	86	90	92	94	96	97	98	99	99	99	99	99					
10	493	494	494	4.0	7.0	14	28	40	50	59	66	73	78	83	87	90	93	95	97	98	99	99	99	99					
15	495	496	496	3.4	7.0	10	22	32	42	51	59	66	72	77	82	86	89	92	95	97	98	99	99	99					
20	497	498	498	2.8	7.0	7	16	25	34	43	51	58	65	71	76	81	85	89	92	95	97	98	99	99					
25	498	499	500	2.5	7.0	6	14	22	30	39	46	54	61	67	73	78	83	87	90	93	96	98	99	99					
30	499	500	501	2.3	7.0	5	12	19	27	35	42	50	57	63	69	75	80	84	88	92	95	97	99	99					
35	500	502	502	1.7	7.0	3	8	14	21	28	35	42	48	55	62	68	74	79	84	88	92	95	98	99					
40	502	503	503	1.4	7.0	2	7	12	18	24	31	38	44	51	58	64	70	76	81	86	91	94	97	99					
45	503	504	505	1.1	7.0	2	5	10	15	21	27	34	40	47	54	60	67	73	78	84	89	93	96	99					
50	504	505	506	1.0	7.0	1	4	8	13	18	24	30	36	43	50	56	63	69	75	81	87	91	95	99					
55	505	506	507	1.0	7.0	1	4	7	11	16	21	27	33	39	45	52	59	65	72	78	84	90	94	98					
60	506	507	508	1.0	7.0	1	3	6	9	13	18	23	29	35	41	48	55	62	68	75	82	88	93	98					
65	507	508	509	1.0	7.0	1	2	5	8	11	16	20	26	31	38	44	51	58	65	72	79	85	92	97					
70	508	509	511	1.0	7.0	1	2	4	6	9	13	18	22	28	34	40	47	54	61	68	76	83	90	96					
75	509	511	512	1.0	7.0	1	1	2	4	6	9	13	17	21	27	32	39	45	53	61	69	77	86	94					
80	511	512	514	1.0	7.0	1	1	2	3	5	8	11	14	19	23	29	35	41	49	57	65	74	83	93					
85	512	514	515	1.0	7.0	1	1	1	2	3	5	7	10	14	18	22	27	34	41	48	57	67	78	89					
90	514	516	518	1.0	7.0	1	1	1	1	2	3	5	7	10	13	17	21	26	33	40	49	59	71	85					
95	517	519	521	1.0	7.0	1	1	1	1	1	2	3	4	5	7	10	13	17	23	29	37	47	60	77					

C

						Spring Percentile and Score																							
	Achievement Norm Score			Fall-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95					
Percentile	Fall	Winter	Spring	Mean	SD	491	494	496	498	500	501	502	503	505	506	507	508	509	511	512	514	515	518	521					
5	490	491	491	6.7	7.4	21	36	47	57	65	72	77	82	86	89	92	94	96	97	98	99	99	99	99					
10	493	494	494	5.7	7.4	14	26	37	46	55	62	68	74	79	83	87	90	92	95	96	98	99	99	99					
15	495	496	496	5.0	7.4	10	21	30	39	47	55	62	68	73	78	82	86	90	92	95	97	98	99	99					
20	497	498	498	4.3	7.4	7	16	24	33	40	48	55	61	67	72	77	82	86	89	92	95	97	99	99					
25	498	499	500	4.0	7.4	6	14	22	30	37	44	51	58	64	69	75	79	84	88	91	94	96	98	99					
30	499	500	501	3.7	7.4	5	12	19	27	34	41	48	54	60	66	72	77	82	86	90	93	96	98	99					
35	500	502	502	3.3	7.4	4	10	17	24	31	37	44	51	57	63	69	74	79	84	88	92	95	97	99					
40	502	503	503	2.7	7.4	3	8	13	19	25	31	37	43	50	56	62	68	74	79	84	88	93	96	99					
45	503	504	505	2.3	7.4	2	6	11	16	22	28	34	40	46	52	59	65	71	76	82	87	91	95	98					
50	504	505	506	2.0	7.4	2	5	9	14	19	25	31	37	43	49	55	61	67	73	79	85	90	94	98					
55	505	506	507	1.6	7.4	2	4	8	12	17	22	28	33	39	45	52	58	64	70	76	82	88	93	97					
60	506	507	508	1.3	7.4	1	4	7	11	15	20	25	30	36	42	48	54	61	67	74	80	86	92	97					
65	507	508	509	1.0	7.4	1	3	6	9	13	17	22	27	33	38	44	51	57	64	71	77	84	90	96					
70	508	509	511	1.0	7.4	1	2	5	8	11	15	19	24	29	35	41	47	54	61	67	75	82	89	95					
75	509	511	512	1.0	7.4	1	2	4	6	10	13	17	22	26	32	38	44	50	57	64	72	79	87	94					
80	511	512	514	1.0	7.4	1	1	3	5	7	10	13	17	21	26	31	37	43	50	57	65	74	83	92					
85	512	514	515	1.0	7.4	1	1	2	4	6	8	11	15	18	23	28	33	40	46	54	62	71	80	90					
90	514	516	518	1.0	7.4	1	1	1	3	4	6	8	11	14	18	22	27	33	39	47	55	64	75	87					
95	517	519	521	1.0	7.4	1	1	1	1	2	3	5	7	9	12	15	19	24	30	36	44	54	66						

Table 3.11. Snapshot of Norms—Phonics & Word Recognition, Grade K

A

						Winter Percentile and Score																							
	Achievement Norm Score			Fall-Winter Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95					
Percentile	Fall	Winter	Spring	Mean	SD	484	486	487	488	489	490	491	492	493	493	494	495	496	496	497	498	499	501	503					
5	482	484	486	4.3	4.1	26	45	59	70	77	83	88	91	94	96	97	98	99	99	99	99	99	99	99					
10	484	486	488	4.2	4.1	13	27	40	51	61	69	76	81	86	89	92	95	96	98	99	99	99	99	99					
15	485	487	490	4.2	4.1	9	20	31	42	51	60	67	74	80	84	88	91	94	96	98	99	99	99	99					
20	486	488	492	4.2	4.1	5	14	23	33	42	50	58	66	72	78	83	87	91	94	96	98	99	99	99					
25	486	489	493	4.2	4.1	5	14	23	33	42	50	58	66	72	78	83	87	91	94	96	98	99	99	99					
30	487	490	494	4.2	4.1	3	9	17	25	33	41	49	56	63	70	76	81	86	90	93	96	98	99	99					
35	488	491	495	4.2	4.1	2	6	11	18	25	32	39	47	54	61	68	74	80	85	90	93	96	98	99					
40	488	492	496	4.2	4.1	2	6	11	18	25	32	39	47	54	61	68	74	80	85	90	93	96	98	99					
45	489	493	497	4.1	4.1	1	4	7	12	18	24	30	37	45	52	59	66	73	79	84	90	94	97	99					
50	489	493	498	4.1	4.1	1	4	7	12	18	24	30	37	45	52	59	66	73	79	84	90	94	97	99					
55	490	494	499	4.1	4.1	1	2	5	8	12	17	23	29	35	42	49	57	64	71	78	84	90	95	99					
60	490	495	500	4.1	4.1	1	2	5	8	12	17	23	29	35	42	49	57	64	71	78	84	90	95	99					
65	491	496	500	4.1	4.1	1	1	3	5	8	12	16	21	27	33	40	47	55	62	70	78	85	92	97					
70	491	496	501	4.1	4.1	1	1	3	5	8	12	16	21	27	33	40	47	55	62	70	78	85	92	97					
75	492	497	503	4.1	4.1	1	1	2	3	5	8	11	15	20	25	31	38	45	53	62	70	79	88	95					
80	493	498	504	4.0	4.1	1	1	1	2	3	5	7	10	14	18	23	29	36	44	52	62	72	82	93					
85	494	499	505	4.0	4.1	1	1	1	1	2	3	4	6	9	12	16	21	27	34	43	52	63	75	89					
90	495	501	507	4.0	4.1	1	1	1	1	1	2	3	4	6	8	11	15	20	26	33	43	54	67	83					
95	496	503	510	4.0	4.1	1	1	1	1	1	1	1	2	3	5	7	10	14	19	25	33	44	58	77					

B

						Spring Percentile and Score																					
	Achievement Norm Score			Winter-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95			
Percentile	Fall	Winter	Spring	Mean	SD	486	488	490	492	493	494	495	496	497	498	499	500	500	501	503	504	505	507	510			
5	482	484	486	4.2	4.1	28	52	68	79	87	91	95	97	98	99	99	99	99	99	99	99	99	99	99			
10	484	486	488	4.2	4.1	14	33	49	63	73	81	87	91	94	96	98	99	99	99	99	99	99	99	99			
15	485	487	490	4.3	4.1	9	24	39	53	64	74	81	87	91	94	96	98	99	99	99	99	99	99	99			
20	486	488	492	4.3	4.1	6	17	30	43	55	65	74	81	86	90	94	96	98	99	99	99	99	99	99			
25	486	489	493	4.3	4.1	3	12	22	34	45	56	65	73	80	86	90	93	96	98	99	99	99	99	99			
30	487	490	494	4.3	4.1	2	8	16	25	36	46	55	64	72	79	85	90	93	96	98	99	99	99	99			
35	488	491	495	4.3	4.1	1	5	11	18	27	36	46	55	64	71	78	84	89	93	96	98	99	99	99			
40	488	492	496	4.4	4.1	1	3	7	12	19	27	36	45	54	63	71	78	84	89	93	96	98	99	99			
45	489	493	497	4.4	4.1	1	2	4	8	13	20	27	36	44	53	62	70	77	84	90	94	97	99	99			
50	489	493	498	4.4	4.1	1	2	4	8	13	20	27	36	44	53	62	70	77	84	90	94	97	99	99			
55	490	494	499	4.4	4.1	1	1	2	5	9	14	20	27	35	43	52	61	69	77	84	90	95	98	99			
60	490	495	500	4.4	4.1	1	1	1	3	6	9	14	20	26	34	42	51	60	69	78	86	92	97	99			
65	491	496	500	4.4	4.1	1	1	1	2	3	6	9	13	19	25	33	41	51	60	70	79	88	94	99			
70	491	496	501	4.4	4.1	1	1	1	2	3	6	9	13	19	25	33	41	51	60	70	79	88	94	99			
75	492	497	503	4.5	4.1	1	1	1	1	2	3	6	9	13	18	25	32	41	50	61	72	82	91	98			
80	493	498	504	4.5	4.1	1	1	1	1	1	2	3	6	9	12	18	24	32	41	51	63	75	86	96			
85	494	499	505	4.5	4.1	1	1	1	1	1	1	2	3	5	8	12	17	24	32	41	53	66	80	93			
90	495	501	507	4.5	4.1	1	1	1	1	1	1	1	1	2	3	5	7	11	17	24	34	47	64	84			
95	496	503	510	4.6	4.1	1	1	1	1	1	1	1	1	1	1	2	3	4	7	12	18	29	45	69			

C

						Spring Percentile and Score																				
	Achievement Norm Score			Fall-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95		
Percentile	Fall	Winter	Spring	Mean	SD	486	488	490	492	493	494	495	496	497	498	499	500	500	501	503	504	505	507	510		
5	482	484	486	8.2	5.7	22	37	49	59	67	74	79	84	87	90	93	95	96	98	98	99	99	99	99		
10	484	486	488	8.3	5.7	13	25	35	45	53	61	67	73	78	83	86	90	92	95	96	98	99	99	99		
15	485	487	490	8.4	5.7	9	19	29	38	46	54	61	67	72	77	82	86	89	92	95	97	98	99	99		
20	486	488	492	8.4	5.7	7	15	23	31	39	46	53	60	66	72	77	81	86	89	92	95	97	99	99		
25	486	489	493	8.4	5.7	7	15	23	31	39	46	53	60	66	72	77	81	86	89	92	95	97	99	99		
30	487	490	494	8.4	5.7	5	11	18	25	32	39	46	53	59	65	71	76	81	86	89	93	96	98	99		
35	488	491	495	8.5	5.7	3	8	14	20	26	33	39	46	52	58	65	70	76	81	86	90	94	97	99		
40	488	492	496	8.5	5.7	3	8	14	20	26	33	39	46	52	58	65	70	76	81	86	90	94	97	99		
45	489	493	497	8.5	5.7	2	6	10	15	21	26	32	39	45	51	58	64	70	76	81	86	91	95	98		
50	489	493	498	8.5	5.7	2	6	10	15	21	26	32	39	45	51	58	64	70	76	81	86	91	95	98		
55	490	494	499	8.5	5.7	1	4	7	11	16	21	26	32	38	44	50	57	63	70	76	82	88	93	97		
60	490	495	500	8.5	5.7	1	4	7	11	16	21	26	32	38	44	50	57	63	70	76	82	88	93	97		
65	491	496	500	8.6	5.7	1	3	5	8	12	16	21	26	31	37	43	50	56	63	70	77	84	90	96		
70	491	496	501	8.6	5.7	1	3	5	8	12	16	21	26	31	37	43	50	56	63	70	77	84	90	96		
75	492	497	503	8.6	5.7	1	2	3	6	9	12	16	20	25	31	36	43	49	56	64	71	79	87	94		
80	493	498	504	8.6	5.7	1	1	2	4	6	9	12	16	20	25	30	36	42	49	57	65	73	83	92		
85	494	499	505	8.7	5.7	1	1	2	3	4	6	9	12	15	19	24	29	35	42	49	58	67	77	85		
90	495	501	507	8.7	5.7	1	1	1	2	3	4	6	9	11	15	19	23	29	35	42	51	60	72	85		
95	496	503	510	8.8	5.7	1	1	1	1	2	3	4	6	8	11	14	18	23	29	35	43	53	65	80		

Table 3.12. Snapshot of Norms—Phonics & Word Recognition, Grade 1

A

						Winter Percentile and Score																			
	Achievement Norm Score			Fall-Winter Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	
Percentile	Fall	Winter	Spring	Mean	SD	489	491	493	495	496	497	498	499	500	501	502	503	504	505	506	508	509	511	514	
5	485	489	491	5.8	4.3	30	55	72	82	89	93	96	98	99	99	99	99	99	99	99	99	99	99	99	
10	488	491	494	5.4	4.3	13	32	49	63	73	81	87	92	95	97	98	99	99	99	99	99	99	99	99	
15	489	493	496	5.2	4.3	9	25	41	55	66	76	83	88	92	95	97	98	99	99	99	99	99	99	99	
20	491	495	497	5.0	4.3	4	14	26	39	51	61	71	78	84	89	93	96	97	99	99	99	99	99	99	
25	492	496	499	4.8	4.3	3	10	20	31	43	54	63	72	79	85	90	93	96	98	99	99	99	99	99	
30	493	497	500	4.7	4.3	2	7	15	25	35	46	56	65	73	80	86	90	94	96	98	99	99	99	99	
35	494	498	501	4.5	4.3	1	5	11	19	28	38	48	57	66	74	81	86	91	94	97	98	99	99	99	
40	495	499	502	4.4	4.3	1	3	8	14	22	30	40	49	58	67	75	81	87	92	95	98	99	99	99	
45	496	500	503	4.2	4.3	1	2	5	10	16	24	32	41	50	59	68	75	82	88	93	96	98	99	99	
50	497	501	504	4.1	4.3	1	1	3	7	12	18	25	34	42	51	60	69	77	84	89	94	97	99	99	
55	498	502	505	4.0	4.3	1	1	2	5	8	13	19	27	35	43	52	61	70	78	85	91	96	98	99	
60	499	503	506	3.8	4.3	1	1	1	3	6	9	14	20	28	36	44	53	63	72	80	88	93	97	99	
65	500	504	507	3.7	4.3	1	1	1	2	4	6	10	15	21	28	37	45	55	65	74	83	90	96	99	
70	501	505	508	3.5	4.3	1	1	1	1	2	4	7	11	16	22	29	38	47	57	67	77	86	94	99	
75	502	506	509	3.4	4.3	1	1	1	1	1	3	5	8	12	17	23	30	39	49	60	71	82	91	98	
80	503	508	510	3.2	4.3	1	1	1	1	1	2	3	5	8	12	17	24	32	41	52	64	76	87	96	
85	505	509	512	3.0	4.3	1	1	1	1	1	1	1	2	4	6	9	13	19	27	36	48	62	77	92	
90	507	511	514	2.7	4.3	1	1	1	1	1	1	1	1	1	2	4	6	10	15	22	32	46	63	84	
95	509	514	516	2.4	4.3	1	1	1	1	1	1	1	1	1	1	2	3	5	8	12	20	31	47	72	

B

						Spring Percentile and Score																							
	Achievement Norm Score			Winter-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95					
Percentile	Fall	Winter	Spring	Mean	SD	491	494	496	497	499	500	501	502	503	504	505	506	507	508	509	510	512	514	516					
5	485	489	491	4.5	4.0	29	56	73	84	91	95	97	98	99	99	99	99	99	99	99	99	99	99	99					
10	488	491	494	4.2	4.0	16	39	57	71	81	88	93	96	97	99	99	99	99	99	99	99	99	99	99					
15	489	493	496	3.9	4.0	8	24	41	55	68	77	84	90	94	96	98	99	99	99	99	99	99	99	99					
20	491	495	497	3.6	4.0	3	13	25	39	51	63	72	80	86	91	94	97	98	99	99	99	99	99	99					
25	492	496	499	3.4	4.0	2	9	19	31	43	54	65	74	81	87	91	95	97	98	99	99	99	99	99					
30	493	497	500	3.2	4.0	1	6	14	24	35	46	56	66	75	82	87	92	95	97	99	99	99	99	99					
35	494	498	501	3.1	4.0	1	4	10	18	27	38	48	58	67	75	82	88	92	96	98	99	99	99	99					
40	495	499	502	2.9	4.0	1	2	7	13	21	30	40	50	59	68	76	83	89	93	96	98	99	99	99					
45	496	500	503	2.8	4.0	1	1	4	9	15	23	32	41	51	60	69	77	84	90	94	97	99	99	99					
50	497	501	504	2.6	4.0	1	1	3	6	11	17	25	33	42	52	61	70	79	86	91	95	98	99	99					
55	498	502	505	2.5	4.0	1	1	2	4	7	12	18	26	34	44	53	63	72	80	87	93	97	99	99					
60	499	503	506	2.3	4.0	1	1	1	2	5	8	13	19	27	35	45	54	64	74	82	89	95	98	99					
65	500	504	507	2.2	4.0	1	1	1	1	3	6	9	14	20	28	36	46	56	66	76	85	92	97	99					
70	501	505	508	2.0	4.0	1	1	1	1	2	4	6	10	15	21	29	38	48	58	69	79	88	95	99					
75	502	506	509	1.9	4.0	1	1	1	1	1	2	4	7	10	16	22	30	39	50	61	73	84	93	98					
80	503	508	510	1.6	4.0	1	1	1	1	1	1	1	3	5	8	12	17	24	33	44	57	71	85	96					
85	505	509	512	1.4	4.0	1	1	1	1	1	1	1	2	3	5	8	12	18	26	36	49	63	79	93					
90	507	511	514	1.1	4.0	1	1	1	1	1	1	1	1	1	2	3	6	9	14	22	32	46	65	86					
95	509	514	516	1.0	4.0	1	1	1	1	1	1	1	1	1	1	1	1	2	4	8	14	23	40	67					

C

						Spring Percentile and Score																					
	Achievement Norm Score			Fall-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95			
Percentile	Fall	Winter	Spring	Mean	SD	491	494	496	497	499	500	501	502	503	504	505	506	507	508	509	510	512	514	516			
5	485	489	491	9.8	5.2	25	44	59	69	77	83	88	91	94	96	97	98	99	99	99	99	99	99	99			
10	488	491	494	9.0	5.2	14	28	42	53	63	71	77	83	87	90	93	95	97	98	99	99	99	99	99			
15	489	493	496	8.8	5.2	11	24	36	47	57	65	73	79	84	88	91	94	96	97	98	99	99	99	99			
20	491	495	497	8.2	5.2	6	16	26	36	46	54	62	69	76	81	86	89	93	95	97	98	99	99	99			
25	492	496	499	8.0	5.2	5	13	22	31	40	49	57	64	71	77	82	87	90	93	96	98	99	99	99			
30	493	497	500	7.7	5.2	4	10	18	26	35	43	51	59	66	72	78	83	88	91	94	97	98	99	99			
35	494	498	501	7.5	5.2	3	8	14	22	30	38	46	53	61	67	74	79	84	89	92	95	98	99	99			
40	495	499	502	7.2	5.2	2	6	11	18	25	32	40	48	55	62	69	75	81	86	90	94	97	99	99			
45	496	500	503	7.0	5.2	1	4	9	14	21	27	35	42	49	57	64	70	77	82	88	92	95	98	99			
50	497	501	504	6.7	5.2	1	3	7	11	17	23	29	36	44	51	58	65	72	79	84	90	94	97	99			
55	498	502	505	6.5	5.2	1	2	5	9	13	19	25	31	38	45	53	60	67	74	81	87	92	96	99			
60	499	503	506	6.2	5.2	1	2	4	7	11	15	20	26	33	40	47	54	62	69	77	83	90	95	98			
65	500	504	507	5.9	5.2	1	1	3	5	8	12	17	22	28	34	41	49	56	64	72	80	87	93	98			
70	501	505	508	5.7	5.2	1	1	2	4	6	9	13	18	23	29	36	43	51	59	67	75	83	91	97			
75	502	506	509	5.4	5.2	1	1	1	3	5	7	11	14	19	25	31	37	45	53	62	71	80	88	96			
80	503	508	510	5.2	5.2	1	1	1	2	3	6	8	11	15	20	26	32	39	47	56	65	75	85	94			
85	505	509	512	4.7	5.2	1	1	1	1	2	3	5	7	10	13	18	23	29	36	45	55	65	78	90			
90	507	511	514	4.1	5.2	1	1	1	1	1	2	3	4	6	8	11	15	20	26	34	43	55	68	84			
95	509	514	516	3.6	5.2	1	1	1	1	1	1	1	2	3	5	7	9	13	18	24	32	43	57	76			

Table 3.13. Snapshot of Norms—Phonics & Word Recognition, Grade 2

A

Percentile							Winter Percentile and Score																			
	Achievement Norm Score			Fall-Winter Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95		
	Fall	Winter	Spring	Mean	SD	492	495	497	498	499	500	501	502	503	504	505	506	507	508	509	510	512	513	516		
5	490	492	494	4.2	3.8	32	58	75	85	91	95	97	98	99	99	99	99	99	99	99	99	99	99	99		
10	493	495	496	3.6	3.8	13	33	51	65	76	84	89	93	96	98	99	99	99	99	99	99	99	99	99		
15	494	497	498	3.5	3.8	9	26	42	57	69	78	85	90	94	96	98	99	99	99	99	99	99	99	99		
20	496	498	499	3.1	3.8	4	14	27	40	52	63	73	80	86	91	94	96	98	99	99	99	99	99	99		
25	497	499	500	2.9	3.8	2	10	20	32	44	55	65	74	81	87	91	94	97	98	99	99	99	99	99		
30	498	500	501	2.8	3.8	1	7	15	25	35	46	57	66	74	81	87	91	95	97	99	99	99	99	99		
35	499	501	502	2.6	3.8	1	4	10	18	28	38	48	58	67	75	82	88	92	95	97	99	99	99	99		
40	500	502	503	2.4	3.8	1	3	7	13	21	30	40	49	59	68	76	83	88	93	96	98	99	99	99		
45	501	503	504	2.2	3.8	1	2	4	9	15	23	32	41	50	60	69	77	83	89	94	97	99	99	99		
50	502	504	505	2.1	3.8	1	1	3	6	11	17	24	33	42	51	61	69	78	85	90	95	98	99	99		
55	503	505	506	1.9	3.8	1	1	2	4	7	12	18	25	34	43	52	62	71	79	86	92	96	99	99		
60	504	506	507	1.7	3.8	1	1	1	2	5	8	13	19	26	35	44	53	63	72	81	88	94	98	99		
65	505	507	508	1.5	3.8	1	1	1	1	3	6	9	14	20	27	35	45	54	64	74	83	91	96	99		
70	506	508	509	1.4	3.8	1	1	1	1	2	4	6	10	14	20	28	36	46	56	67	77	87	94	99		
75	507	509	510	1.2	3.8	1	1	1	1	1	2	4	6	10	15	21	29	37	48	59	70	82	91	98		
80	508	510	511	1.0	3.8	1	1	1	1	1	1	2	4	7	10	15	22	30	39	50	63	75	87	97		
85	510	512	512	1.0	3.8	1	1	1	1	1	1	1	2	3	5	7	11	17	24	34	46	60	76	92		
90	512	513	514	1.0	3.8	1	1	1	1	1	1	1	1	1	2	3	5	8	13	20	30	43	61	83		
95	514	516	517	1.0	3.8	1	1	1	1	1	1	1	1	1	1	1	2	3	6	10	17	27	44	71		

B

Percentile						Spring Percentile and Score																			
	Achievement Norm Score			Winter-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	
	Fall	Winter	Spring	Mean	SD	494	496	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	514	517	
5	490	492	494	3.0	3.6	35	63	79	88	93	96	98	99	99	99	99	99	99	99	99	99	99	99	99	
10	493	495	496	2.5	3.6	14	36	54	69	79	87	92	95	97	98	99	99	99	99	99	99	99	99	99	
15	494	497	498	2.2	3.6	6	20	36	51	64	74	82	88	92	95	97	98	99	99	99	99	99	99	99	
20	496	498	499	2.0	3.6	4	14	28	42	55	66	75	83	88	92	95	97	99	99	99	99	99	99	99	
25	497	499	500	1.8	3.6	2	10	21	33	46	57	67	76	83	89	93	96	97	99	99	99	99	99	99	
30	498	500	501	1.7	3.6	1	6	15	25	37	48	59	68	77	83	89	93	96	98	99	99	99	99	99	
35	499	501	502	1.5	3.6	1	4	10	18	28	39	50	60	69	77	84	89	93	96	98	99	99	99	99	
40	500	502	503	1.3	3.6	1	2	7	13	21	30	40	51	60	69	77	84	90	94	97	98	99	99	99	
45	501	503	504	1.2	3.6	1	1	4	9	15	23	32	41	51	61	70	78	85	90	94	97	99	99	99	
50	502	504	505	1.0	3.6	1	1	2	6	10	16	24	33	42	52	61	70	79	86	91	95	98	99	99	
55	503	505	506	1.0	3.6	1	1	1	3	7	11	17	25	33	43	52	62	71	80	87	93	97	99	99	
60	504	506	507	1.0	3.6	1	1	1	2	4	8	12	18	25	34	43	53	63	73	81	89	95	98	99	
65	505	507	508	1.0	3.6	1	1	1	1	3	5	8	13	19	26	34	44	54	64	75	84	91	97	99	
70	506	508	509	1.0	3.6	1	1	1	1	1	3	5	8	13	19	26	35	45	56	67	78	87	95	99	
75	507	509	510	1.0	3.6	1	1	1	1	1	2	3	5	9	13	19	27	36	46	58	70	82	92	98	
80	508	510	511	1.0	3.6	1	1	1	1	1	1	2	3	6	9	14	20	28	37	49	62	75	87	97	
85	510	512	512	1.0	3.6	1	1	1	1	1	1	1	1	2	4	6	9	15	22	31	43	58	75	92	
90	512	513	514	1.0	3.6	1	1	1	1	1	1	1	1	1	2	4	6	10	15	23	34	49	68	88	
95	514	516	517	1.0	3.6	1	1	1	1	1	1	1	1	1	1	1	1	2	4	8	14	24	40	68	

C

						Spring Percentile and Score																			
	Achievement Norm Score			Fall-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	
Percentile	Fall	Winter	Spring	Mean	SD	494	496	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	514	517	
5	490	492	494	6.3	4.5	27	49	64	74	82	88	91	94	96	98	99	99	99	99	99	99	99	99	99	
10	493	495	496	5.5	4.5	14	30	45	57	67	75	81	86	90	93	95	97	98	99	99	99	99	99	99	
15	494	497	498	5.2	4.5	11	25	38	50	61	69	76	82	87	91	94	96	97	98	99	99	99	99	99	
20	496	498	499	4.7	4.5	6	16	27	38	48	57	65	73	79	84	88	92	95	97	98	99	99	99	99	
25	497	499	500	4.4	4.5	4	12	22	32	41	51	59	67	74	80	85	89	92	95	97	98	99	99	99	
30	498	500	501	4.2	4.5	3	9	17	26	35	44	53	61	68	75	81	86	90	93	96	98	99	99	99	
35	499	501	502	3.9	4.5	2	7	13	21	29	38	46	55	62	70	76	82	87	91	94	97	98	99	99	
40	500	502	503	3.6	4.5	1	5	10	17	24	32	40	48	56	64	71	77	83	88	92	95	98	99	99	
45	501	503	504	3.3	4.5	1	4	8	13	19	26	34	42	50	57	65	72	78	84	89	93	96	99	99	
50	502	504	505	3.1	4.5	1	2	6	10	15	21	28	36	43	51	59	66	73	80	86	91	95	98	99	
55	503	505	506	2.8	4.5	1	2	4	7	12	17	23	30	37	45	52	60	68	75	82	88	93	97	99	
60	504	506	507	2.5	4.5	1	1	3	5	9	13	18	24	31	38	46	54	62	70	77	84	91	96	99	
65	505	507	508	2.2	4.5	1	1	2	4	7	10	14	20	26	32	40	47	56	64	72	80	88	94	98	
70	506	508	509	2.0	4.5	1	1	1	3	5	7	11	15	21	27	33	41	49	58	67	75	84	92	97	
75	507	509	510	1.7	4.5	1	1	1	2	3	5	8	12	16	22	28	35	43	51	61	70	80	89	96	
80	508	510	511	1.4	4.5	1	1	1	1	2	4	6	9	13	17	23	29	36	45	54	64	75	85	95	
85	510	512	512	1.0	4.5	1	1	1	1	1	2	3	5	7	10	14	19	25	33	41	52	64	77	90	
90	512	513	514	1.0	4.5	1	1	1	1	1	1	1	2	4	6	8	12	16	22	29	39	51	66	83	
95	514	516	517	1.0	4.5	1	1	1	1	1	1	1	1	2	3	4	6	9	14	19	27	38	53	74	

Table 3.14. Snapshot of Norms—Phonics & Word Recognition, Grade 3

A

						Winter Percentile and Score																				
	Achievement Norm Score			Fall-Winter Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95		
Percentile	Fall	Winter	Spring	Mean	SD	494	496	498	499	500	501	502	503	504	505	505	506	507	508	509	510	511	513	515		
5	492	494	494	3.0	3.4	34	62	79	88	93	96	98	99	99	99	99	99	99	99	99	99	99	99	99		
10	495	496	496	2.5	3.4	13	33	52	67	78	85	91	94	97	98	99	99	99	99	99	99	99	99	99		
15	496	498	498	2.3	3.4	8	25	42	57	70	79	86	91	94	97	98	99	99	99	99	99	99	99	99		
20	498	499	499	2.0	3.4	3	12	25	38	51	62	72	80	86	91	94	97	98	99	99	99	99	99	99		
25	499	500	501	1.8	3.4	2	8	17	29	41	53	63	73	80	86	91	95	97	98	99	99	99	99	99		
30	500	501	502	1.6	3.4	1	5	12	21	32	43	54	64	73	80	86	91	95	97	99	99	99	99	99		
35	501	502	502	1.5	3.4	1	3	8	15	24	34	44	54	64	73	80	87	91	95	97	99	99	99	99		
40	502	503	503	1.3	3.4	1	2	5	10	17	25	35	45	55	64	73	81	87	92	95	98	99	99	99		
45	503	504	504	1.1	3.4	1	1	3	6	11	18	26	35	45	55	64	73	81	87	93	96	98	99	99		
50	503	505	505	1.1	3.4	1	1	3	6	11	18	26	35	45	55	64	73	81	87	93	96	98	99	99		
55	504	505	506	1.0	3.4	1	1	2	4	7	12	19	26	35	45	55	64	73	82	88	94	97	99	99		
60	505	506	507	1.0	3.4	1	1	1	2	4	8	13	19	27	35	45	55	65	74	83	90	95	98	99		
65	506	507	508	1.0	3.4	1	1	1	1	3	5	8	13	19	27	35	45	55	66	76	85	92	97	99		
70	507	508	509	1.0	3.4	1	1	1	1	1	3	5	9	13	19	27	35	45	56	68	78	88	95	99		
75	508	509	510	1.0	3.4	1	1	1	1	1	2	3	5	9	13	19	27	36	47	58	70	82	92	98		
80	509	510	511	1.0	3.4	1	1	1	1	1	1	2	3	5	9	13	19	27	37	48	61	75	88	97		
85	511	511	512	1.0	3.4	1	1	1	1	1	1	1	1	2	3	5	9	14	20	30	42	57	75	92		
90	512	513	514	1.0	3.4	1	1	1	1	1	1	1	1	1	2	3	5	9	14	22	33	47	66	87		
95	515	515	516	1.0	3.4	1	1	1	1	1	1	1	1	1	1	1	1	2	4	6	12	21	37	65		

B

						Spring Percentile and Score																					
	Achievement Norm Score			Winter-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95			
Percentile	Fall	Winter	Spring	Mean	SD	494	496	498	499	501	502	502	503	504	505	506	507	508	509	510	511	512	514	516			
5	492	494	494	1.7	3.2	30	60	78	88	94	97	98	99	99	99	99	99	99	99	99	99	99	99	99			
10	495	496	496	1.5	3.2	14	38	58	73	83	90	94	97	98	99	99	99	99	99	99	99	99	99	99			
15	496	498	498	1.2	3.2	5	19	36	52	66	76	84	90	94	97	98	99	99	99	99	99	99	99	99			
20	498	499	499	1.1	3.2	3	12	26	41	55	67	77	84	90	94	96	98	99	99	99	99	99	99	99			
25	499	500	501	1.0	3.2	1	8	18	31	44	56	67	77	84	90	94	96	98	99	99	99	99	99	99			
30	500	501	502	1.0	3.2	1	4	12	22	33	45	57	67	76	84	89	94	96	98	99	99	99	99	99			
35	501	502	502	1.0	3.2	1	2	7	14	24	35	46	57	67	76	83	89	94	97	98	99	99	99	99			
40	502	503	503	1.0	3.2	1	1	4	9	16	25	35	46	56	66	75	83	89	94	97	99	99	99	99			
45	503	504	504	1.0	3.2	1	1	2	5	10	17	25	35	45	56	66	75	83	89	94	97	99	99	99			
50	503	505	505	1.0	3.2	1	1	1	3	6	11	17	25	35	45	55	66	75	83	90	95	98	99	99			
55	504	505	506	1.0	3.2	1	1	1	3	6	11	17	25	35	45	55	66	75	83	90	95	98	99	99			
60	505	506	507	1.0	3.2	1	1	1	2	3	7	11	17	25	34	44	55	65	76	84	91	96	99	99			
65	506	507	508	1.0	3.2	1	1	1	1	2	4	7	11	17	24	33	44	55	66	77	86	93	98	99			
70	507	508	509	1.0	3.2	1	1	1	1	1	2	4	7	11	17	24	33	44	55	67	79	89	96	99			
75	508	509	510	1.0	3.2	1	1	1	1	1	1	2	4	7	11	16	24	33	44	57	70	82	93	99			
80	509	510	511	1.0	3.2	1	1	1	1	1	1	1	2	4	6	10	16	24	34	46	60	74	88	97			
85	511	511	512	1.0	3.2	1	1	1	1	1	1	1	1	2	4	6	10	16	24	35	49	65	81	95			
90	512	513	514	1.0	3.2	1	1	1	1	1	1	1	1	1	1	2	3	6	10	17	28	43	63	86			
95	515	515	516	1.0	3.2	1	1	1	1	1	1	1	1	1	1	1	1	2	3	7	12	23	41	70			

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						Spring Percentile and Score																				
	Achievement Norm Score			Fall-Spring Cond. Growth		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95		
Percentile	Fall	Winter	Spring	Mean	SD	494	496	498	499	501	502	502	503	504	505	506	507	508	509	510	511	512	514	516		
5	492	494	494	4.1	4.0	30	54	69	80	87	91	94	97	98	99	99	99	99	99	99	99	99	99	99		
10	495	496	496	3.4	4.0	14	31	47	60	70	78	84	89	93	95	97	98	99	99	99	99	99	99	99		
15	496	498	498	3.2	4.0	10	25	39	52	63	72	79	85	89	93	95	97	98	99	99	99	99	99	99		
20	498	499	499	2.8	4.0	5	14	25	37	48	58	66	74	80	86	90	93	96	97	99	99	99	99	99		
25	499	500	501	2.5	4.0	3	10	19	30	40	50	59	67	75	81	86	90	94	96	98	99	99	99	99		
30	500	501	502	2.3	4.0	2	7	15	23	33	42	51	60	68	75	81	86	91	94	96	98	99	99	99		
35	501	502	502	2.1	4.0	1	5	11	18	26	35	44	52	61	68	76	82	87	91	95	97	99	99	99		
40	502	503	503	1.9	4.0	1	3	7	13	20	28	36	45	53	61	69	76	82	88	92	96	98	99	99		
45	503	504	504	1.7	4.0	1	2	5	9	15	22	29	37	45	54	62	70	77	83	89	93	97	99	99		
50	503	505	505	1.7	4.0	1	2	5	9	15	22	29	37	45	54	62	70	77	83	89	93	97	99	99		
55	504	505	506	1.4	4.0	1	1	3	7	11	16	23	30	38	46	54	63	71	78	85	90	95	98	99		
60	505	506	507	1.2	4.0	1	1	2	4	8	12	17	24	31	38	46	55	64	72	80	87	92	97	99		
65	506	507	508	1.0	4.0	1	1	1	3	5	9	13	18	24	31	39	47	56	65	74	82	89	95	99		
70	507	508	509	1.0	4.0	1	1	1	2	4	6	9	13	18	25	32	40	48	57	67	76	85	93	98		
75	508	509	510	1.0	4.0	1	1	1	1	2	4	6	10	14	19	25	32	41	50	60	70	80	90	97		
80	509	510	511	1.0	4.0	1	1	1	1	1	3	4	7	10	14	19	26	33	42	52	63	74	86	95		
85	511	511	512	1.0	4.0	1	1	1	1	1	1	2	3	5	7	10	15	20	28	37	48	60	75	90		
90	512	513	514	1.0	4.0	1	1	1	1	1	1	1	2	3	5	7	11	15	22	30	40	53	68	86		
95	515	515	516	1.0	4.0	1	1	1	1	1	1	1	1	1	1	2	3	5	9	13	20	30	46	69		

4. Conclusion and Discussion

This report describes the norming procedure used to develop the grades K–3 achievement and growth user norms for the three domains assessed in Foundational Skills on the Spanish MAP Reading Fluency assessment: Phonological Awareness, Phonics & Word Recognition, and Language Comprehension. It also provides snapshots of the norms and guidance on how to interpret them. These norms offer useful context for schools, educators, and parents to understand student performance at a point in time as well as growth over time relative to peers in the norming sample, thereby supporting more informed evaluation of student outcomes. The norms for Spanish Foundational Skills domains were released in Fall 2026.

Spanish MAP Reading Fluency was introduced in Fall 2019, shortly before the COVID-19 pandemic substantially disrupted schooling across the United States and internationally. Beginning in the second half of the 2019/20 school year, many schools shifted to remote instruction, temporarily suspended in-person learning, or experienced interruptions in assessment administration. Because the assessment was still in its initial implementation period, these disruptions likely affected schools' ability to adopt and administer the assessment consistently. As a result, testing volumes during 2019/20 and 2020/21 school years were low. The pandemic also had a sustained impact on student learning, with evidence of lower overall achievement and widened learning gaps for students who were already experiencing academic challenges (Kuhfeld et al., 2022; Lewis et al., 2021).

To better reflect current assessment use and student performance, this study used data from the three most recent school years: 2022/23, 2023/24, and 2024/25. These years provided substantially larger testing volumes and generally stable score patterns for norm development. The resulting norming sample included students across grades K–3 and represented diverse demographic and geographic backgrounds. As described earlier in this report, students were represented across all four U.S. census regions and most census divisions, although participation was concentrated in the South, particularly Texas, a state with a large population of school-age Spanish-speaking students. Together, these characteristics provide important context for interpreting the achievement and growth norms presented in this report.

Although normative information provides valuable context for interpreting student achievement and growth, decisions about student placement or instructional planning should not rely on norms alone. Instead, educators should consider normative results alongside other evidence of student learning, such as classroom performance and teacher observations.

Test scores alone have limited meaning without appropriate context. NWEA remains committed to providing that context through robust and regularly updated achievement and growth norms. NWEA will continue to monitor performance trends in the Spanish MAP Reading Fluency assessment and update these norms as assessment use expands and additional data become available.

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