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# AIMSweb

## Reporting with Lexiles

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An Introduction to Using AIMSweb Reports with Lexile Scores



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## *An Introduction to Using AIMSweb Reports with Lexiles*

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# What is a Lexile?

## Big Idea:

Lexiles provide a single measure of...  
*Reader Ability and Text Readability*

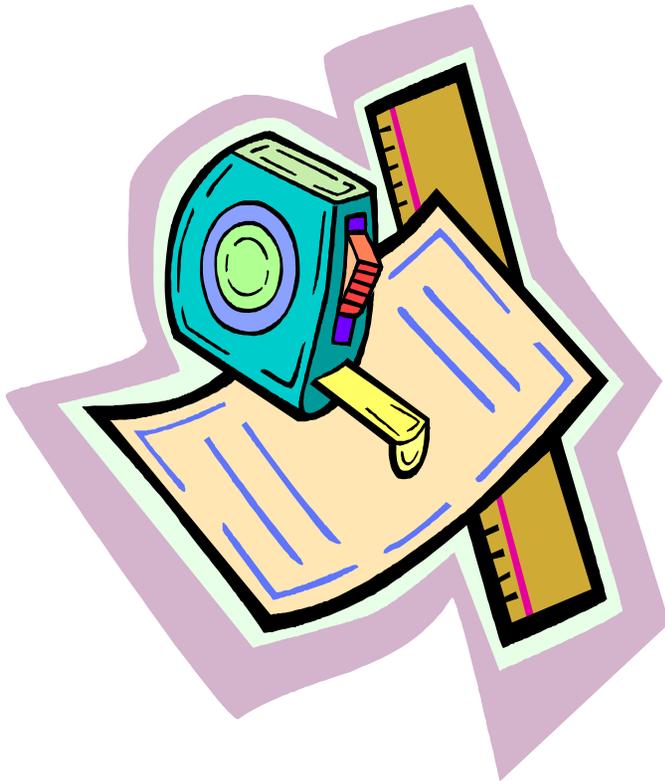
# The Lexile Framework<sup>®</sup> for Reading

Allows us to...

- Measure **reader ability** and **text readability** with a common metric: **Lexiles**
- Forecast the level of **comprehension** a reader is expected to experience with a particular text



# An Analogy: Lexiles are like inches...



- A universal, accurate measurement system
- Used to measure a student's current "size" and growth over time
- Not grade specific - students come in different sizes and grow at different rates

# As a Measure of Text Readability

- **Approximately 115,000 books with Lexile measures are available at [www.Lexile.com](http://www.Lexile.com)**
  - **Over 150 publishers use Lexile levels**
- **Tens of millions of articles with Lexile measures are available through database-services partners (EBSCO and Pro-Quest)**

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# Three Key Concepts

- **Reading Ability** (people)

the cognitive set students use to construct meaning from text as measure on tests

- **Readability** (the text)

the difficulty of reading materials based on dimensions or characteristics of the text

- **Reading Comprehension** (ability students will have to understand the text)

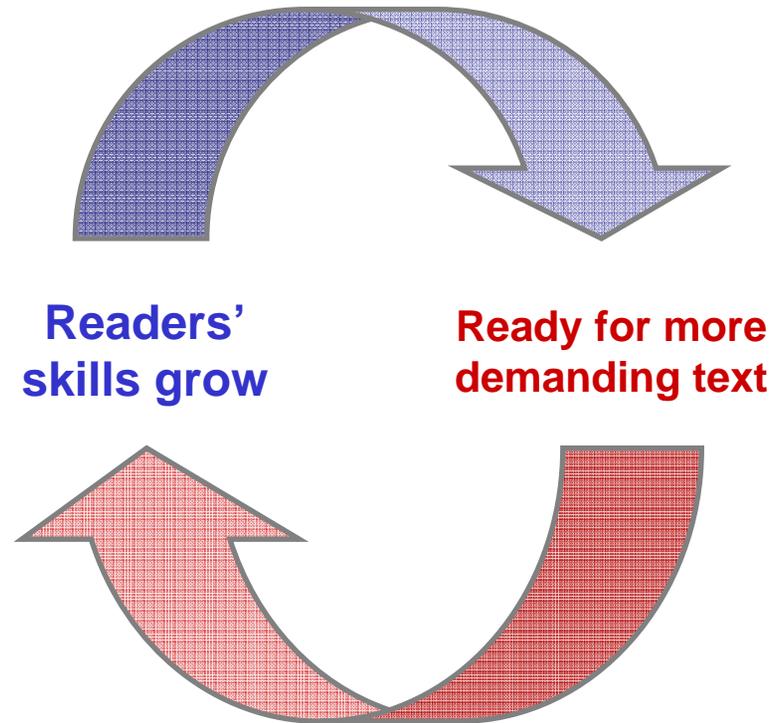
the construction of meaning from local text

## Teacher Benefits of Lexile:

- Matching a reader's lexile measure to a text with the same lexile measure leads to an expected 75% comprehension rate
- By going up 50 or down 100, students should still be within the same comprehension rate

# How does it work?

- Again, readers can be targeted with **“matched”** texts that they are forecasted to read with **75% comprehension.** (Schnick and Knickelbine, 2000).
- As a reader’s **skills grow**, he or she can be targeted with **more demanding texts.**
- And, as the texts become **more demanding**, then the **reader grows.**



# Comprehension & Lexile Scores

- When a student earns a **Lexile Score** on an AIMSweb measure, that score can be **linked to text that is at his/her level.**
- If a student's score is matched with text leveled at the same score...

*(e.g., Lexile level of 1000L matched with a book written at 1000L),*

...the **comprehension** rate for that materials is estimated at **about 75%.**

**This is the goal.** This ensures the materials is not too easy or difficult.



# Comprehension & Lexile Scores



- Students reading materials at a matched Lexile level are likely to:
  - **Sustain the meaning** of the thread of the text
  - Read with **motivation**
  - Read with appropriate **emotion and emphasis**
  - **Comprehend** what they read

# Comprehension & Lexile Scores

- A **mismatch** (e.g., A **1000L** reader reading **1250L** text) may lead to comprehension issues (**e.g., 50% comprehension**) because:
  - They encounter so much unfamiliar vocabulary and difficult syntactic structures that the meaning of the text is frequently lost.
  - Become frustrated and seldom choose to read independently at this level of comprehension.
- Conversely, a **1000L** reader reading **750L** text (**e.g., 90% comprehension**) will likely have:
  - Total control of the text
  - Read with speed
  - Experience automaticity during the reading process.

Though this is desirable, it may lead to slower reading growth and skill acquisition over time.

# Examples of Text Matching with Forecasted Comprehension

*Table 18. Comprehension rates of different person abilities with the same material.*

Person Measure	Calibration for a Grade 10 Biology Textbook	Forecast Comprehension Rate
500	1000	25%
750	1000	50%
1000	1000	75%
1250	1000	90%
1500	1000	96%

# Examples of Text Matching with Forecasted Comprehension

Table 17. Comprehension rates for the same individual with materials of varying comprehension difficulty.

Person Measure	Text Calibration	Sample Titles	Forecast Comprehension
1000	500	<i>Tornado</i> (Byars)	96%
1000	750	<i>The Martian Chronicles</i> (Bradbury)	90%
1000	1000	<i>Reader's Digest</i>	75%
1000	1250	<i>The Call of the Wild</i> (London)	50%
1000	1500	<i>On the Equality Among Mankind</i> (Rousseau)	25%

# What is Linking?

- “*Putting the scores from two or more tests on the same scale*” (National Research Council, 1999, p. 15).
- Conducted by **MetaMetrics**, Inc. and **Pearson** for the purpose of targeting students to books and texts.

**Purpose:** To predict the books and texts a student should be targeted with for successful reading experiences, given their performance on R-CBM and MAZE.

# What is the Purpose Behind Linking AIMSweb with Lexile Scores?



- Parents typically ask teachers questions, such as:
  - *“If my child is in the fourth grade and scores 140 on the Reading Curriculum-Based Measurement (R-CBM), what does this mean?”*
  - *“Based on my child’s test results, what can he read and how well?”*
  - *“Is my child well prepared to meet the reading demands of grade-level materials?”*

# What is the Purpose Behind Linking AIMSweb with Lexile Scores?

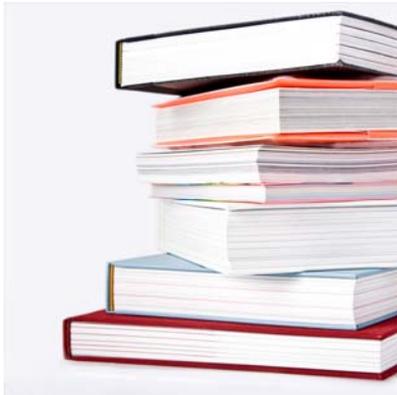
- **Linking Lexiles and AIMSweb scores for R-CBM and MAZE:**
  - Provides a mechanism for targeting each student's reading ability with text on a **common scale**.
  - Serves as an **anchor** to which texts and assessments can be connected.
  - This allows parents, teachers, and administrators to **speak the same language**.



# What is the Purpose Behind Linking AIMSweb with Lexile Scores?

By using the Lexile Framework, the **same metric is applied** to:

The books the children read



The tests they take

<p>Chris' favorite food was pickle potato chips. Chris wanted to eat them at every meal. He wouldn't eat anything but pickle potato chips. Chris ate chips for breakfast instead of cereal and juice. He ate chips for lunch instead of a sandwich and fruit. Chris ate chips for supper instead of roast beef and corn. He even ate chips instead of vanilla ice cream for dessert.</p> <p>Chris ate so many chips he smelled sour like pickles. His hands, his clothes, and his breath all smelled sour. No one wanted to talk to Chris because of his sour breath. The dog wouldn't even go near Chris. The kisses Chris gave his mom and dad each night smelled like pickles because his teeth smelled like pickles. It didn't matter how long he brushed his teeth or how much dental floss and toothpaste he used. Chris couldn't get rid of the pickle smell.</p> <p>Chris' mom and dad were becoming quite concerned about their son. Chips weren't healthy for growing boys. Besides, they didn't like the smell of sour pickles that had taken over their home.</p> <p>"I know how much you like chips, Chris," said his father. "You eat them all the time, but growing boys need more than junk food."</p> <p>Chris listened to his dad as he munched on a pickle potato chip. The next morning, Chris started to pour himself a bowl of chips but stopped. He remembered what his dad told him.</p> <p>"Why am I always eating chips?" he asked himself. He decided it was time to try something new.</p> <p>Chris reached for a box of cereal. He dug out a couple of flakes and took a tiny bite. The cereal tasted wonderful. Chris poured a big bowl of cereal and ate it all without one pickle chip.</p> <p>Now Chris can pet the dog and kiss his parents again.</p>	<p>11 23 35 48 61 66 78 92 105 118 130 142 150 160 171 182 207 220 233 241 253 259 273 286 297 308</p>
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(R-CBM & MAZE)

The results that are reported.

ID	Name	Corrects	Errors	Accuracy	Performance Summary	Potential Instructional Action	Lexile® Measure
00476	Randi, Roscoe	156.0			Well Above Average	Consider Need for Individualized Instruction	770L
00484	Osborne, Reginald	148.0			Well Above Average	Consider Need for Individualized Instruction	720L
<b>Well Above Average &gt;= 148.0 (90th Tile)</b>							
00487	Young, Marshall	113.0			Above Average	Consider Need for Individualized Instruction	555L
<b>Above Average &gt;= 113.0 (75th Tile)</b>							
00552	Misc, Camille	109.0			Average	Continue Current Program	510L
00693	Felix, Mikaela	97.0			Average	Continue Current Program	475L
00587	Dennis, Michael	91.0			Average	Continue Current Program	445L
00556	Elford, Miles	90.0			Average	Continue Current Program	440L
00738	Brook, Dawn	82.0			Average	Continue Current Program	400L
00566	George, Austin	81.0			Average	Continue Current Program	395L
00560	Butler, Kaley	80.0			Average	Continue Current Program	380L
00729	Karl, Kaitlin	80.0			Average	Continue Current Program	380L
<b>Target = 77.0</b>							
00688	Bradford, Todd	62.0			Average	Continue Current Program	300L
<b>Average &gt;= 60.0 (75th Tile)</b>							
00537	Corbin, Bobby	58.0			Below Average	Further Assess and Consider Individualizing Program	285L
00637	Colon, Wiley	40.0			Below Average	Further Assess and Consider Individualizing Program	180L
<b>Below Average &gt;= 36.0 (50th Tile)</b>							
00523	Hancock, Julian	22.0			Well Below Average	Begin Immediate Problem Solving	80L
00417	Maxwell, David	12.0			Well Below Average	Begin Immediate Problem Solving	20L

# What is the Purpose Behind Linking AIMSweb with Lexile Scores?

- Allows educators and parents access to **lists of leveled books and texts** that are:
  - matched to student's level
  - appropriately challenging
  - Avoids frustration.
- **Why?** To get students to read more, and, thereby **read better.**

**It's all about  
student  
improvement!**



# Adds Value to What you Already Do

- Linking **AIMSweb** and **Lexiles** adds value to one scale without having to administer an additional test. It offers:
  - Increased **interpretability**  
“Based on this test score, what can my child actually read?”
  - Increased **diagnostic capability** (e.g., “Based on this test score, what are the student’s weaknesses?”)
  - Increased **instructional use** (e.g., “Based on these test scores, I need to modify my instruction to include these skills.”).



# What does the Lexile Measure?

- **Text complexity** and **reader ability** are measured in the same unit:

**The Lexile.**

- **Text complexity** is determined by examining such characteristics as word frequency and sentence length.
- Items and text are calibrated using the **Rasch model**.  
([http://en.wikipedia.org/wiki/Rasch\\_model](http://en.wikipedia.org/wiki/Rasch_model))

# The Lexile Score

- The typical range of the **Lexile Scale is from 200 to 1700 Lexiles**, although actual Lexile measures can range from below zero (BR) to above 2000 Lexiles

Grade Level	Reader Measures	Text Measures (Lexile Range)
1	up to 300L	200L to 400L
2	140L to 500L	300L to 500L
3	330L to 700L	500L to 700L
4	445L to 810L	650L to 850L
5	565L to 910L	750L to 950L
6	665L to 1000L	850L to 1050L
7	735L to 1065L	950L to 1075L
8	805L to 1100L	1000L to 1100L
9	855L to 1165L	1050L to 1150L
10	905L to 1195L	1100L to 1200L
11-12	940L to 1210L	1100L to 1300L

# The Lexile Score

- The typical range of the **Lexile Scale is from 200 to 1700 Lexiles**, although actual Lexile measures can range from below zero (BR) to above 2000 Lexiles
- AIMSweb will report Lexiles scores that fall at or below 0L as **“BR” (Beginning Reader)**

124002	Garrison, Randall	3.0			Below Average	Further Assess and Consider Individualizing Program	BR
124007	Kramer, Kylie	3.0			Below Average	Further Assess and Consider Individualizing Program	BR
124003	Sloan, Maurice	3.0			Below Average	Further Assess and Consider Individualizing Program	BR
<b>Below Average &gt;= 3.0 (10th %ile)</b>							
124012	Fowler, Tessa	2.0			Well Below Average	Begin Immediate Problem Solving	BR
124017	Rubio, Jenny	2.0			Well Below Average	Begin Immediate Problem Solving	BR
124018	Schultz, Nolan	2.0			Well Below Average	Begin Immediate Problem Solving	BR
124006	Woods, Chloe	2.0			Well Below Average	Begin Immediate Problem Solving	BR

# Lexiles in AIMSweb Reports (A Demo)

# Selecting a Book

- Ensure that the books on the lists are also **developmentally appropriate** for the readers.
- The **Lexile measure** is one factor related to comprehension and is **a good starting point** in the selection process of a book for a specific reader.



# Selecting a Book

- **Other factors to consider** when matching a book with a reader include:
  - Student developmental level
  - Motivation
  - Interest
  - Amount of background knowledge possessed by the reader
  - Characteristics of the text (e.g., illustrations and formatting)



# Extra Things You Can Do with Lexiles

# Teacher Benefits of Lexile:

- Develop individualized reading lists that are tailored to provide appropriately challenging reading.
- Enhance thematic teaching by building a bank of titles at varying Lexile levels that not only support the theme, but provide a way for all students to successfully participate in the theme.
- Use the free Lexile Book Database (at [www.Lexile.com](http://www.Lexile.com)) and “Find a Book”
- Use the free Lexile calculator (at [www.Lexile.com](http://www.Lexile.com)) to gauge expected reading comprehension at different Lexile measures for readers and texts.

# TEACHER'S EXPERTISE + LEXILES =IMPROVED STUDENT ACHIEVEMENT

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- Differentiating Instruction
- Matching class work to students' reading ability
- Positive growth in reading proficiency and motivation
- Effective communication with parents about lexiles and reading growth



# Communicating with Parents

- Don't get too focused on numbers—ranges are important
- Give examples of books and other text materials
- Talk about where the student is now, but also where they are going
- Explain the Lexile Framework is a tool for matching readers with appropriately challenging texts, not a reading program

# Communicating with Parents

- Emphasize that the Lexile Framework does not address:
  - interest*
  - age appropriateness*
  - text support or quality*
- It looks only at text difficulty—books should always be previewed

# Lexiling Your Library

- Website—[www.lexile.com](http://www.lexile.com)—it's free and continuously updated
- CD—Lexiles Titles database for an initial purchase of \$24.95, includes 2 updates per year. The benefit is that you can print customized reading lists and labels.

# LIBRARIAN'S EXPERTISE + LEXILES =IMPROVED STUDENT ACHIEVEMENT

- Appropriately matched books that are engaging and challenging
- Improved reading success and enjoyment
- Positive growth in reading proficiency and motivation
- Effectively managed differentiated instruction



## Teacher Benefits of Lexile:

- Teachers can save word documents that they create and determine a lexile score through [www.lexile.com](http://www.lexile.com). There is a 5,000 word limit per document and it must be in plain text
- Spanish translation is available
- To determine a lexile for word documents, go to the “tools” section of the website. On the left side, select “Lexile analyzer”

# A FAQ About AIMSweb Measures and Lexile Ratings

**Question:** *“I put the R-CBM and Maze probes in the Lexile® Analyzer tool and received a different Lexile measure. Why?”*

**Answer:** The Lexile level received from the Lexile Analyzer tool is the suggested reading level of that passage.

The Lexile measure a student obtains on an R-CBM or Maze passage is a measure of that student’s performance on the passage. They are different functions.

Without a research study of the type conducted by Pearson in collaboration with MetaMetrics, it would not be possible to associate a student Lexile measure with raw scores obtained on R-CBM or Maze probes.

# Technical Information & Development



# Technical Documentation & Guides Available for Lexiles with AIMSweb

**LEXILE**

**Linking the R-CBM and MAZE with The Lexile Framework® for Reading**

*A Study to Link the Reading Curriculum-Based Measurement and Reading Maze with the Lexile Framework*

September 14, 2011

Prepared by MetaMetrics for:  
Pearson

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# The Linking Study

- Pearson recruited a total of 25 schools in 12 districts, from 8 states—all of which volunteered to participate in the linking study.
- Goal was to have between 500 and 1,000 students per grade.



# The Linking Study

- **Three tests** were administered to students from May 2 through May 20, 2011:

- **The Lexile Linking Test**
- **R-CBM test**
- **MAZE test**



- Students' **Lexile Linking Test** scores were matched separately to the **R-CBM scores** and to the **MAZE scores**. This gave researchers two separate linking analyses.
  - For **R-CBM**, a total of **5,444** students (Grades 1 through 8), or 92.6%, had both test scores.
  - For **MAZE**, a total of **5,316** students (Grades 1 through 8), or 90.4%, had both test scores.

# Conversion Tables Created

Conversion Table for the R-CBM Raw Score to the Lexile Measure-Grade 1

R-CBM Raw Score	Research Lexile Measure	Reported Lexile Measure	R-CBM Raw Score	Research Lexile Measure	Reported Lexile Measure	R-CBM Raw Score	Research Lexile Measure	Reported Lexile Measure
0	-375	BR	60	77	75L	120	377	375L
1	-369	BR	61	82	80L	121	382	380L
2	-364	BR	62	87	85L	122	387	385L
3	-354	BR	63	92	90L	123	392	390L
4	-343	BR	64	97	95L	124	397	395L
5	-331	BR	65	102	100L	125	402	400L
6	-320	BR	66	107	105L	126	407	405L
7	-309	BR	67	112	110L	127	412	410L
8	-298	BR	68	117	115L	128	417	415L
9	-286	BR	69	122	120L	129	422	420L
10	-275	BR	70	127	125L	130	427	425L
11	-264	BR	71	132	130L	131	432	430L
12	-253	BR	72	137	135L	132	437	435L
13	-245	BR	73	142	140L	133	442	440L
14	-237	BR	74	147	145L	134	447	445L
15	-229	BR	75	152	150L	135	452	450L
16	-221	BR	76	157	155L	136	457	455L
17	-214	BR	77	162	160L	137	462	460L
18	-206	BR	78	167	165L	138	467	465L
19	-198	BR	79	172	170L	139	472	470L
20	-190	BR	80	177	175L	140	477	475L
21	-182	BR	81	182	180L	141	482	480L
22	-175	BR	82	187	185L	142	487	485L
23	-167	BR	83	192	190L	143	492	490L
24	-159	BR	84	197	195L	144	497	495L
25	-151	BR	85	202	200L	145	502	500L
26	-143	BR	86	207	205L	146	507	505L
27	-136	BR	87	212	210L	147	512	510L
28	-128	BR	88	217	215L	148	517	515L
29	-120	BR	89	222	220L	149	522	520L
30	-112	BR	90	227	225L	150	527	525L
31	-104	BR	91	232	230L	151	532	530L
32	-97	BR	92	237	235L	152	537	535L
33	-89	BR	93	242	240L	153	542	540L
34	-81	BR	94	247	245L	154	547	545L
35	-73	BR	95	252	250L	155	552	550L
36	-65	BR	96	257	255L	156	557	555L
37	-57	BR	97	262	260L	157	562	560L
38	-50	BR	98	267	265L	158	567	565L
39	-43	BR	99	272	270L	159	572	570L
40	-36	BR	100	277	275L	160	577	575L
41	-30	BR	101	282	280L	161	582	580L
42	-23	BR	102	287	285L	162	587	585L
43	-16	BR	103	292	290L	163	592	590L
44	-10	BR	104	297	295L	164	597	595L
45	-3	BR	105	302	300L	165	602	600L
46	5	5L	106	307	305L	166	607	605L
47	10	10L	107	312	310L	167	612	610L
48	20	20L	108	317	315L	168	617	615L
49	25	25L	109	322	320L	169	622	620L
50	30	30L	110	327	325L	170	627	625L
51	35	35L	111	332	330L	171	632	630L
52	40	40L	112	337	335L	172	637	635L
53	45	45L	113	342	340L	173	642	635L
54	48	50L	114	347	345L	174	647	635L
55	51	50L	115	352	350L	175	652	635L
56	54	55L	116	357	355L	176	657	635L
57	57	55L	117	362	360L	177	662	635L
58	67	65L	118	367	365L	178	667	635L
59	72	70L	119	372	370L	179	672	635L

Conversion Table for the R-CBM Raw Score to the Lexile Measure-Grade 1 (cont.)

R-CBM Raw Score	Research Lexile Measure	Reported Lexile Measure	R-CBM Raw Score	Research Lexile Measure	Reported Lexile Measure	R-CBM Raw Score	Research Lexile Measure	Reported Lexile Measure
180	677	635L	210	827	635L	240	977	635L
181	682	635L	211	832	635L	241	982	635L
182	687	635L	212	837	635L	242	987	635L
183	692	635L	213	842	635L	243	992	635L
184	697	635L	214	847	635L	244	997	635L
185	702	635L	215	852	635L	245	1002	635L
186	707	635L	216	857	635L	246	1007	635L
187	712	635L	217	862	635L	247	1012	635L
188	717	635L	218	867	635L	248	1017	635L
189	722	635L	219	872	635L	249	1022	635L
190	727	635L	220	877	635L	250	1027	635L
191	732	635L	221	882	635L			
192	737	635L	222	887	635L			
193	742	635L	223	892	635L			
194	747	635L	224	897	635L			
195	752	635L	225	902	635L			
196	757	635L	226	907	635L			
197	762	635L	227	912	635L			
198	767	635L	228	917	635L			
199	772	635L	229	922	635L			
200	777	635L	230	927	635L			
201	782	635L	231	932	635L			
202	787	635L	232	937	635L			
203	792	635L	233	942	635L			
204	797	635L	234	947	635L			
205	802	635L	235	952	635L			
206	807	635L	236	957	635L			
207	812	635L	237	962	635L			
208	817	635L	238	967	635L			
209	822	635L	239	972	635L			

# Conversion Tables Created

Conversion Table for the R-CBM Raw Score to the Lexile Measure-Grade 3

R-CBM Raw Score	Research Lexile Measure	Reported Lexile Measure	R-CBM Raw Score	Research Lexile Measure	Reported Lexile Measure	R-CBM Raw Score	Research Lexile Measure	Reported Lexile Measure
0	- 100	BR	60	291	290L	120	591	590L
1	- 90	BR	61	296	295L	121	596	595L
2	- 80	BR	62	301	300L	122	601	600L
3	- 70	BR	63	306	305L	123	606	605L
4	- 60	BR	64	311	310L	124	611	610L
5	- 50	BR	65	316	315L	125	616	615L
6	- 40	BR	66	321	320L	126	621	620L
7	- 30	BR	67	326	325L	127	626	625L
8	- 20	BR	68	331	330L	128	631	630L
9	- 10	BR	69	336	335L	129	636	635L

**Excerpt from Grade 3, R-CBM Table**

# Conversion Tables Created

Target = 77.0							
46790	Strother, Jace	71.0	5.0	93.4%	Below Average	Further Assess and Consider Individualizing Program	345L
47359	Whitaker, Ali	71.0	14.0	83.5%	Below Average	Further Assess and Consider Individualizing Program	345L
47103	Ford, Lucy	62.0	9.0	87.3%	Below Average	Further Assess and Consider Individualizing Program	300L
47030	Bishop, Mackenzie	46.0	7.0	86.8%	Below Average	Further Assess and Consider Individualizing Program	220L
Below Average >= 46.0 (10th %ile)							
46890	Stokes, Whitney	39.0	9.0	81.3%	Well Below Average	Begin Immediate Problem Solving	180L
47138	Kilmer, Kenny	34.0	9.0	79.1%	Well Below Average	Begin Immediate Problem Solving	150L
47234	Gralish, Tabitha	22.0	16.0	57.9%	Well Below Average	Begin Immediate Problem Solving	80L
97139	Moreno, Chase	18.0	6.0	75.0%	Well Below Average	Begin Immediate Problem Solving	55L

**Excerpt from Grade 3, R-CBM Student Report listing Lexile Scores with R-CBM Scores**

R-CBM Raw Score	Research Lexile Measure	Reported Lexile Measure
60	291	290L
61	296	295L
62	301	300L
63	306	305L
64	311	310L
65	316	315L
66	321	320L
67	326	325L
68	331	330L
69	336	335L

**Excerpt from Grade 3, R-CBM Table**

# Authors & Contributors

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# The End