MOBY.READ

Moby.Read
Scoring Guide

Supporting Moby.Read v2.0

Table of Contents

Introduction

Moby.Read is a suite of self-administered oral reading fluency (ORF) assessments for benchmarking and progress monitoring student reading levels. Moby.Read runs in a Chrome browser or on an iPad and is automatically scored. The benchmark test is designed for students in Grades K through 5 and progress monitor test for students in Grades 1 through 5. Moby.Read uses automatic speech recognition (ASR) and natural language processing (NLP) technologies to automatically score oral reading fluency and comprehension in English. Test scores and audio recordings are immediately available online and support effective decision-making and tracking progress for improving student performance.

Moby.Read provides reliable results of key oral reading fluency measures. Moby.Read Benchmark, designed to be administered three times a year, reports Words Correct per Minute, Accuracy, Comprehension, Expression, and Reading Level. Moby.Read scores are color-coded to facilitate interpretation. To complement the benchmark assessment, Moby.Read Progress Monitor further enables teachers to monitor below-benchmark students' oral reading fluency skills throughout the year. An automated placement system presents passages tailored to students' reading levels from a bank of grade-appropriate, engaging narrative passages licensed from University of Oregon's Behavioral Research and Teaching Unit.

Test scores can be used for a variety of administrative and pedagogical purposes. For example, teachers can use test scores to group students with similar scores for tailored instructional intervention. Scores on multiple aspects of student performance can also help teachers identify skill areas in need of instructional intervention.

Target Audience

The Moby.Read Scoring Guide is intended for educational professionals tasked with evaluating the oral reading ability of students in Grades K through 5. Educators should familiarize themselves with the information in this guide to ensure student scores are interpreted appropriately and used fairly. For an in-depth discussion of the development of Moby.Read content, automated scoring systems, and the validation of Moby.Read scores including correlation with other ORF instruments, refer to the *Moby.Read Technical Manual*.
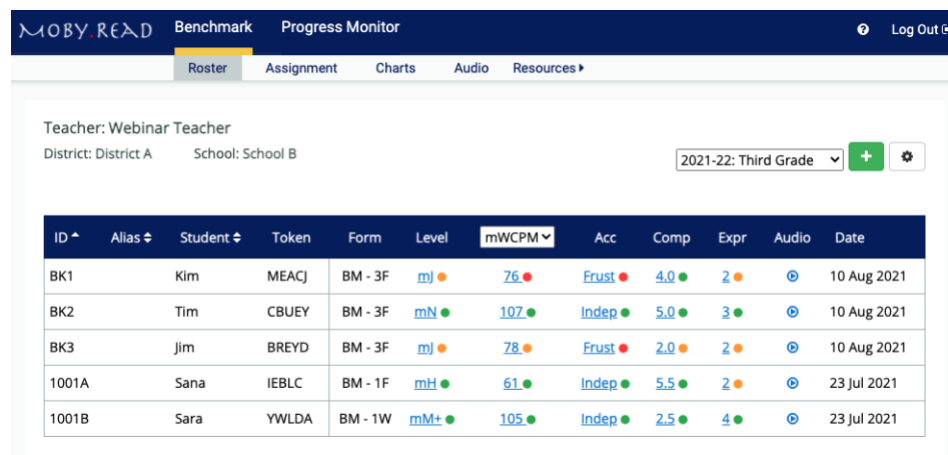
Accessing Student Test Results

Shortly after a student completes a Moby.Read assessment, test results are made available for review on the Teacher's class roster.

You need a Moby.Read account to access student score reports. Registration is by invitation only. Contact your School Administrator to request access. If you are a School Administrator, refer to the *Moby.Read User Management Guide* for information on how to register users.

Note: Any person accessing student score reports must adhere to FERPA rules if the educational agency or institution is receiving funding from the U.S. Department of Education.

Score Reports

Moby.Read score reports display the latest test results for students of a given grade and year.
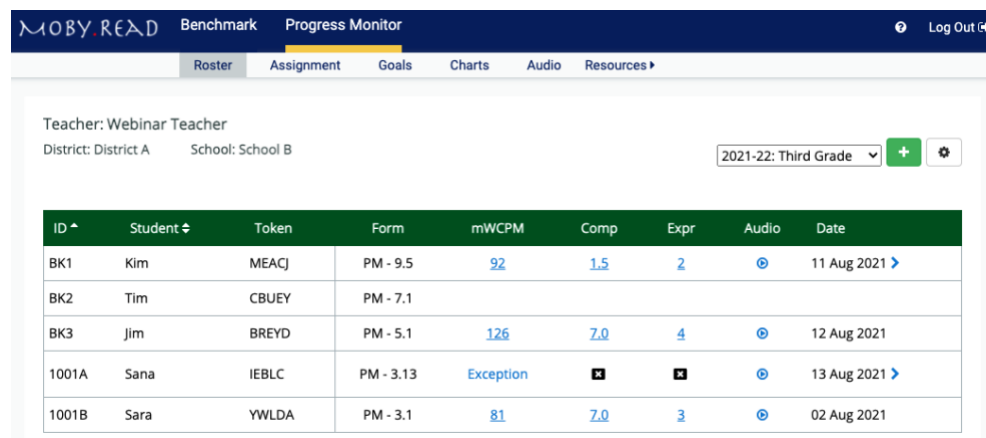

Figure 1: Benchmark score report

You can access both Moby.Read Benchmark and Progress Monitor score reports from your Teacher account:

- Benchmark: Click Teacher at www.mobyread.com and sign in. All registered Moby.Read users can review scores. Refer to the *Moby.Read User Management Guide* for specific access permissions to student scores per user role.

- Progress monitor: Switch to the Progress Monitor platform from the top navigation menu.

Figure 2: Progress Monitor score report

Benchmark Progress Charts

Scores are linked to Progress Charts for easy tracking of progress over time. Progress Charts can be accessed by selecting the score you wish to review for a given student to display on the roster or by clicking **Charts** on the top navigation menu.
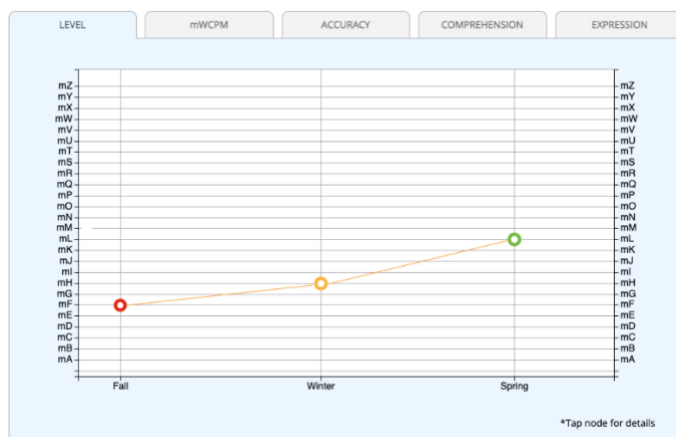
Figure 3: Moby.Read Level Benchmark Progress Chart

Progress Charts display current and previous test scores along with corresponding testing dates. Each data point represents a score for a given test date. Color-coded longitudinal performance graphs provide a quick view of the student's progress. For Kindergarten assessments, Progress Charts display green or orange color codes only.

- ● Green   Scores are at or above grade level

- ● Orange   Scores are slightly below grade level

- ● Red   Scores are below grade level

- Select any of the tabs at the top of the screen to display other Progress Charts for a given student.

- Hover over a data point to view the test score and date. Select the data point to review student recordings for that date.

- To return to the Class Roster page, click **Roster** on the top navigation menu.

Progress Monitor Progress Charts

In the Progress Monitor Progress Chart, both Benchmark and Progress Monitor scores are displayed for easy tracking of progress over time. Select the score you wish to review for a given student to display the corresponding chart.
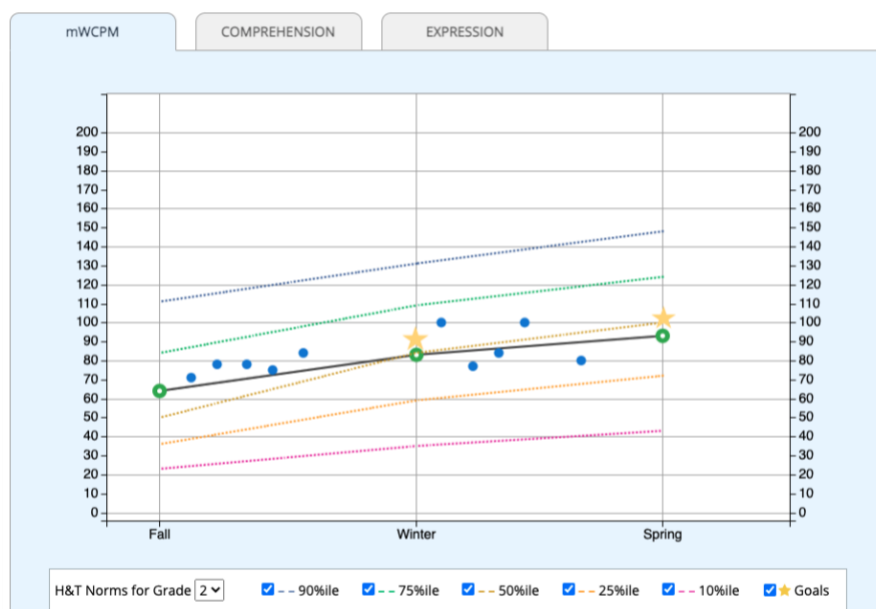
Figure 4: Progress Monitor Progress Chart

Progress Monitor charts display current and previous Benchmark and Progress Monitor test scores along with corresponding testing dates. Each data point represents a score for a given test date. Click the data point to see details on test administration date and test form.

- ● Green   Scores are at or above grade level

- ● Orange   Scores are slightly below grade level

- ● Red   Scores are below grade level

- ● Blue   Progress Monitor scores

- ★ Star   Progress Monitor goal

The charts also have a Hasbrouck and Tindall (2017) norm lines (10, 25, 50, 75, 90%ile) for tracking students' progress against national norms. The filters located on the bottom of the chart can be used to hide or unhide the percentile lines and the goals.

Score Components

Moby.Read evaluates different aspects of a student's oral reading performance that are combined into a summary Moby.Read Level. Score reports include the following components:

Table 1: Moby.Read scores at a glance

Grade	Score Component	Description	Scale
K-5	*Moby.Read Levels	The student's overall reading level as a combination of three ORF components: Rate, Comprehension, and Accuracy.	mA – mZ, or ☒
1-5	mWCPM (Moby.Read's Words Correct Per Minute)	A scaled words correct per minute based on words correctly read and the difficulty of the passages the student read.	10-210 WCPM
1-5	*WCPM (Words Correct Per Minute)	The rate at which the student reads words correctly, reported as words correct per minute (WCPM).	0-250 WCPM
K-5	*Accuracy	Percentage of correctly read words out of the total number of words attempted.	0-100%
K-5	Comprehension	Measures how well the student understands the material based on retellings and answers to content questions.	0-8
1-5	Expression	Measures the student's ability to read with meaningful phrasing, timing, and intonation.	0-4

*Note: *Benchmark only. Progress Monitor does not report back Level, WCPM, and Accuracy.*

For Kindergarten assessments, Moby.Read reports only three score components: Moby.Read Level, Comprehension, and Accuracy. Accuracy is reported by color code—green or orange. Level and Comprehension scores are always coded green, if scores are produced.

Moby.Read Levels

The Moby.Read Level reflects the student's overall oral reading fluency ability. Moby.Read Levels are available only for Moby.Read Benchmark tests. Levels consider the reader's Rate, Comprehension, and Accuracy, and are reported on an alphabetic scale from mA (Moby.Read A) through mZ (Moby.Read Z). Levels reflect how well the student is able to read the assigned passages given the difficulty of the passages, the student's grade level, and time of year.

Both grade level and time of year of the assessment are factors determining the color codes. If a student's score is two or three Levels below target, the Level is tagged orange, indicating a need for instructional intervention. If the student's score is four or more Levels below target, the student is at risk and the Level is marked in red.

Table 2: Moby.Read Levels associated with grade and time of year

Moby.Read Level	Grade
mA	K (spring)
mB	
mC	1st (fall)
mD	
mE	1st (winter)
mF	
mG	1st (spring)
mH	
mI	2nd (fall)
mJ	2nd (winter)
mK	2nd (spring)
mL	3rd (fall)
mM	3rd (winter)
mN	3rd (spring)
mO	4th (fall)
mP	4th (winter)
mQ	4th (spring)
mR	5th (fall)
mS	5th (winter)
mT	5th (spring)
mU	6th (fall)
mV	6th (winter)
mW	6th (spring)
mX	above 6th
mY	above 6th
mZ	above 6th
☒	Scoring exception. See Exception Scoring – Grades 1-5 for more information.

Assessing a student's Moby.Read Level accurately works best when you use forms that closely match the reader's level. You may need to test repeatedly to pinpoint this level. It is recommended that at the beginning of the instructional year, administration starts with the student's grade level in order to obtain a grade-appropriate baseline. If the student performs several levels below a reliable measurement on a test of that grade, the score report and the data point description in the Progress Chart will display a minus

sign (-) after the level, for example, mD-. Likewise, the report will show a plus sign (+) if the student's Level exceeds the upper bound, for example, mK+. To pinpoint the Moby.Read Level, you can retest the student with an easier or more difficult test using Table 2 above. For example, if the student's Level was reported as mD-, consider retesting the student with the 1st Grade fall test, which is associated with the Level mD. If the student's Level was mK+, you might retest using the 2nd Grade spring test. To check the upper and lower bounds for each form, refer to the *Moby.Read Technical Manual*.

Using Moby.Read Levels to Select Reading Texts

Moby.Read Levels are useful for individualizing instruction. Because Moby.Read Levels are linked to text difficulty, Level scores can suggest appropriate reading materials for students in need of instructional intervention.

To help link to other programs with text leveling, use the Fountas & Pinnell Equivalence Table shown in Figure 5. Click **Resources** on the top navigation menu under Benchmark and select **F&P Level Equivalence Table** to access the table. The Fountas & Pinnell levels aligned with the Moby.Read Levels are Instructional Levels.

Fountas & Pinnell Equivalence Table

Moby.Read Reading Level	Fountas & Pinnell
Below mD	A-E
mD	F
mE	G
mF	H
mG	I
mH	J
mI	K
mJ	L
mK	M
mL	N
mM	O
mN	P
mO	Q
mP	R
mQ	S
mR	T
mS	U
mT	V
Above mT	W-Z

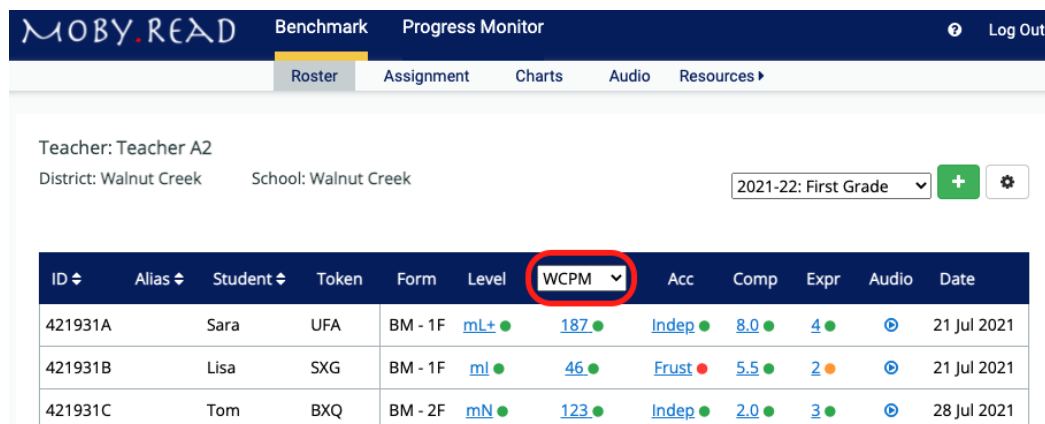| Key |
|---|
| K or beginning 1st Grade |
| 1st Grade |
| 2nd Grade |
| 3rd Grade |
| 4th Grade |
| 5th Grade |
| 6th Grade |

Figure 5: Moby.Read Levels mapped to the Fountas & Pinnell Text Level Gradient™

It is common practice to match student ORF levels closely with texts in specific level ranges. However, research has shown that with the right instructional support, students who practice reading texts at levels that are more difficult than their instructional level

can improve reading ability (Brown, Mohr, Wilcox, & Barrett, 2017; Morgan, Wilcox, & Eldredge, 2000). Therefore, when selecting appropriate reading material for a student, teachers familiar with the student's reading ability are encouraged to select texts based on careful evaluation of the student's individual ability and goals.

mWCPM (Words Correct Per Minute) – Grades 1-5

mWCPM (Moby Words Correct Per Minute) is an adjusted WCPM that takes into account the passage difficulty and reader's ability. mWCPM is scaled on Hasbrouck & Tindall's 2017 ORF norms. Passage difficulty is often a combination of lexical difficulty (e.g., rare words, technical words, multisyllabic words) and/or syntactic complexity (e.g., long sentences, many compound sentences). Since WCPM scores from Moby.Read's Progress Monitor are designed to track students' progress, it is important to minimize WCPM score fluctuations simply due to the differences in text difficulty, as those changes do not reflect the change in the student's reading ability. mWCPM provides you with a consistent, comparable measure of accurate reading rate across passages. For Benchmark tests, you can also view the student's raw WCPM score by clicking the mWCPM drop-down menu and selecting WCPM.

Figure 6: WCPM scores on Benchmark roster

Accuracy

Accuracy is reported as a level that indicates how well a student can handle texts in the assigned form. Levels are reported as:

- **Indep**endent (Indep: 96%-100%): The reader can independently handle texts at this level, color coded as green.

- **Instr**uctional (Instr: 91%-95%): The reader can now be taught the skills needed to read texts at this level, color coded as orange.

- **Frust**ration (Frust: 90% and below): The reader is presumed to find reading this level of text frustrating, color coded as red.

A "correctly read" word is read without significant mispronunciation, omission, or substitution with another word. The Frustration level (i.e., low accuracy scores) may mean that a student needs practice in decoding, sight words, and/or word recognition.

Research suggests that when a student reads less than 90% of a text accurately, the text is at a difficulty level that might cause frustration for the student (Johnson & Kress, 1965). Therefore, Moby.Read marks accuracy scores below 90% as Frustration level.

Comprehension

Comprehension scores convey a student's understanding of the reading materials. Teachers can use Comprehension scores to evaluate whether a student needs help decoding and constructing meaning from texts. For Grades 1 to 5, scores range from 0 to 8, and are based on students' retelling of the passages in their own words, and on two short-answer questions about each passage. For Kindergarten assessments, scores also range from 0 to 8, but are only based on responses to two short-answer questions. Table 3 provides guidance for interpreting Comprehension scores.

Table 3: Moby.Read Comprehension scores

Score	Performance	Interpretation
0 or 1	Retellings and responses were silent, unintelligible, or irrelevant.	No evidence of comprehension
2	The reader attempted a few responses, but most responses were silent, unintelligible, or inaccurate.	Minimal evidence of comprehension
3	A few responses were accurate and complete, but most provided only partial information.	Limited comprehension
4	Some responses were accurate and complete, but some provided only partial information.	Partial comprehension
5	Most responses were accurate and complete. The reader missed a few questions or provided partial answers but included enough information to suggest understanding of major passage concepts.	Satisfactory comprehension
6	Most responses were accurate and complete. The reader could have provided more detail for some responses, but responses included major and minor concepts of the passage, main narrative path, and sequential logic.	Good comprehension
7 or 8	Responses were accurate and complete. Responses conveyed comprehension of the major and minor concepts of the passage, the main narrative path, and sequential logic.	Complete comprehension

The Moby.Read Comprehension scale is identical across grade levels. Color-coding reflects the expectations and standards considered developmentally appropriate for the respective grade corresponding test form. For example, a Comprehension score of 2 is marked in red, indicating below grade level performance for higher grades (4 and 5), but not for lower grades (K through 3).

Expression – Grades 1-5

The Moby.Read Expression score measures how well a student reads the passage with appropriate phrasing, emphasis, intonation, and pausing. Expression scores can help identify students who may need more practice in meaningful phrasing to capture the meaning of passages. Scores range from 0 to 4. Table 4 provides descriptions of the Expression scores and their relationship to performance targets.

Table 4: Moby.Read Expression scores

Score	Performance	Interpretation	Target
0	Responses were silent or provided an insufficient sample of speech for rating Expression.	No evidence of Expression	🔴 Below target. Intervention required
1	The reader's rendition of the text was mostly word-by-word reading with no reflection of word, phrase, or sentence meaning.	Word-by-word reading	
2	The reader's rendition of the text was a mixture of word-by-word reading and larger word groupings that conveyed some text structure and meaning.	Partially fluent and expressive reading	🟠 Slightly below target
3	Most of the reader's phrasing, pausing and intonation was appropriate to the meaning of the text.	Mostly fluent and expressive reading	🟢 At or above target
4	The reader's phrasing, pausing, emphasis and intonation appropriately expressed the structure and meaning of the text.	Fully fluent and expressive reading	

Exception Scoring – Grades 1-5

Exceptions are an important feature for Moby.Read. They typically indicate that the student is struggling to read the passage content and/or technical issues with headsets or background noise adversely impacted the recordings. Specifically, the Moby.Read scoring algorithm returns an exception if any of the following events occur:

- Speech time is less than ten seconds.
- Less than 10 percent of words in a passage are recognized as correct.
- Words Correct Per Minute (WCPM) is below ten or above 300.
- Median Accuracy score is below 60%.
- There is only one scorable passage.
- Speech is unintelligible

If one of the three scored passages triggers an exception, the scores are calculated from the remaining two passages. If the student produces more than 10 percent of words in the remaining passages correctly, Expression is calculated as the average of those passages; otherwise, an Expression score of zero is returned.

An exception can also be triggered if median Accuracy of the session is below 60%.

If two or more scored passages trigger an exception, Moby.Read reports all scores with an ⊠, and Reading Level contains a hyperlink with the word "Exception". Hovering over this hyperlink will display the reason for the exception.

When exceptions occur, try to understand the reason for the exception. After viewing the hyperlink, listen to the recordings to determine further actions. If the student doesn't speak, speaks too low, or the performance is adversely impacted by background noise or equipment issues, it is recommended that the student be retested on the same form. If, after listening to the responses, it is determined that the form is too difficult for the student, it is recommended that the student be retested on a form one grade level lower than the initial administration.
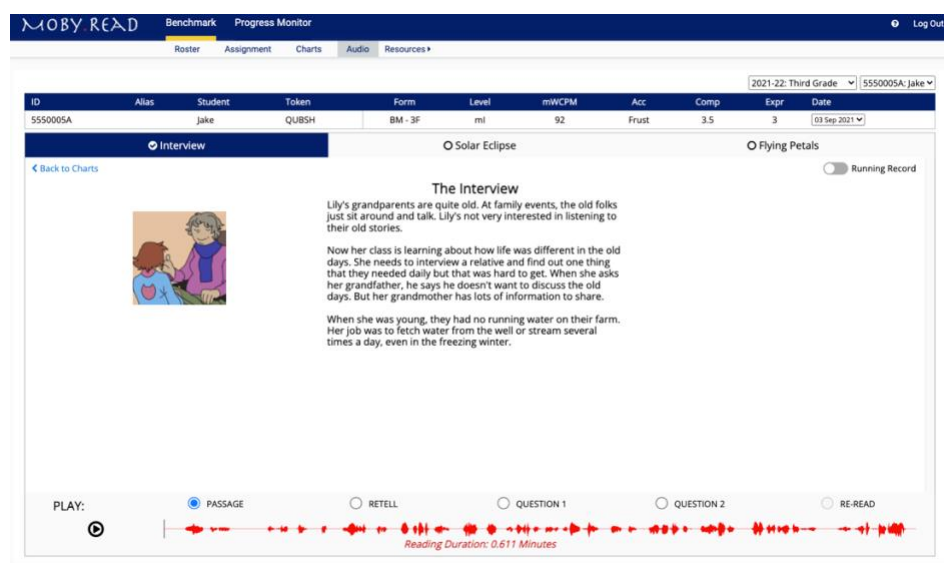
Reviewing Audio Recordings of Student Performance

For Benchmark Tests

Benchmark Audio Performance Page

Moby.Read captures audio recordings of student's oral performances for all three scored passages (the first passage is a practice passage and is not scored) on the Audio Performance Page. For each scored passage, the Audio Performance page displays four or five recordings: the student's first reading, the student's retelling of the passage, the student's answers to the two short-answer questions, and the second reading of the passage after listening to a model reading (optional).

To access the Audio Performance page, click play ▶ in the roster's Audio column for a given student or click **Audio** on the top navigation menu.

Figure 7: Moby.Read Audio Performance page

Use the radio buttons with passage titles at the top of the page to select other passages for playback. The bottom of the page provides the audio controls. Use the radio buttons below a given passage to select different responses for the passage including: Passage (reading), Retell, Question 1, Question 2, and Re-Read.

If a student had multiple test administrations, you can choose a date from the Date drop-down menu and listen to recordings of tests that were administered previously in the year. You can also jump to Audio Performance pages of other students in your class or students on your different rosters from the two drop-down menus on the top right corner.

Figure 8: Drop-down menus for other audio performances

Automatic Running Record Forms

Turn on the Running Record slider to see an automated error analysis of misreads and omissions of each passage read aloud. You can also review passage-level Accuracy, WCPM, and Expression scores right below the slider. This feature is available only for Moby.Read Benchmark.


Figure 9: Automatic Running Record

Running Record Forms

You can conduct a running record analysis to gain insight into the types of reading errors a student is making during read alouds.

To download running record forms, select Printable Running Records from **Resources** on the top navigation menu. Select the form(s) that contains the passage for your running record analysis and click **Download** (Figure 10). If needed, refer to the instructions for a detailed analysis, or a simpler words correct per minute analysis, which are downloadable from the link below the check boxes.
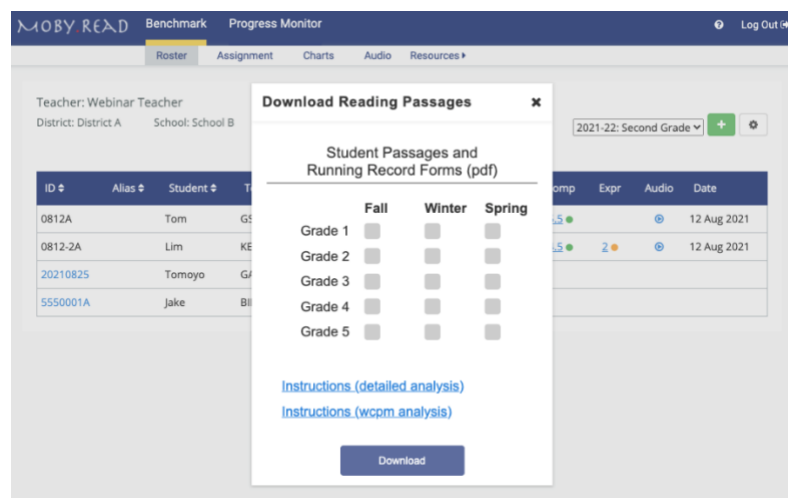
Figure 10: Downloading Benchmark running record forms

To calculate words correct per minute for a passage, you can use the reading duration shown in decimal time under the waveform on the Audio Performance page (Figure 11).
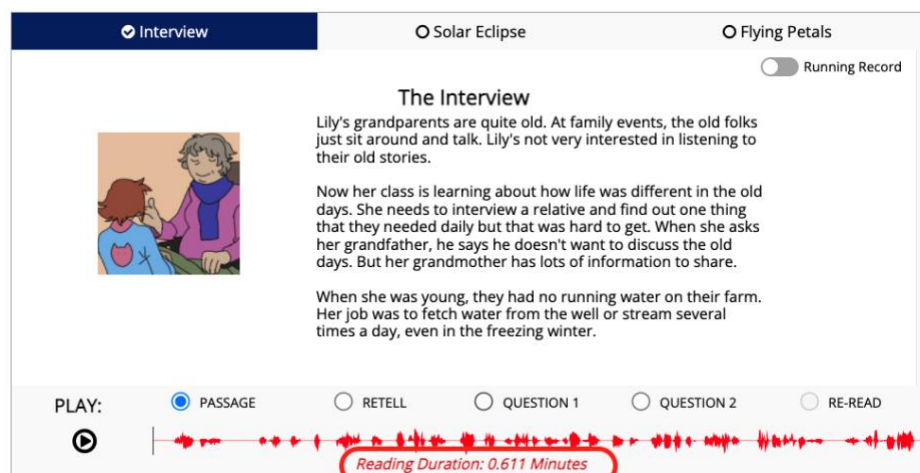
Figure 11: Reading duration on Audio Performance page

- Share insights gained from recordings with reading specialists, parents, and with the students themselves. The recordings provide a way to monitor progress. If a student makes great improvement during a school year, it might be especially

encouraging to listen to how the student's reading improved, together with the student.

- Determine whether the environment is too noisy, whether the student is not speaking loud enough, or is talking to another student. In some cases, students may not have understood what was expected of them during the test, and remained silent. This type of information can help clarify the validity of test scores, and guide decisions regarding retesting.

For Progress Monitor Tests

The Progress Monitor Audio Performance page has the same features as the Benchmark Audio Performance page. You can listen to any re-read performance by clicking the radio button right above the waveform. The number indicated the number of the re-read performance and each mWCPM score is displayed in parenthesis. For instance, in Figure 12, the first re-read performance scored 108 mWCPM and the second scored 86 mWCPM. The automatic running record feature is not available for Progress Monitor.
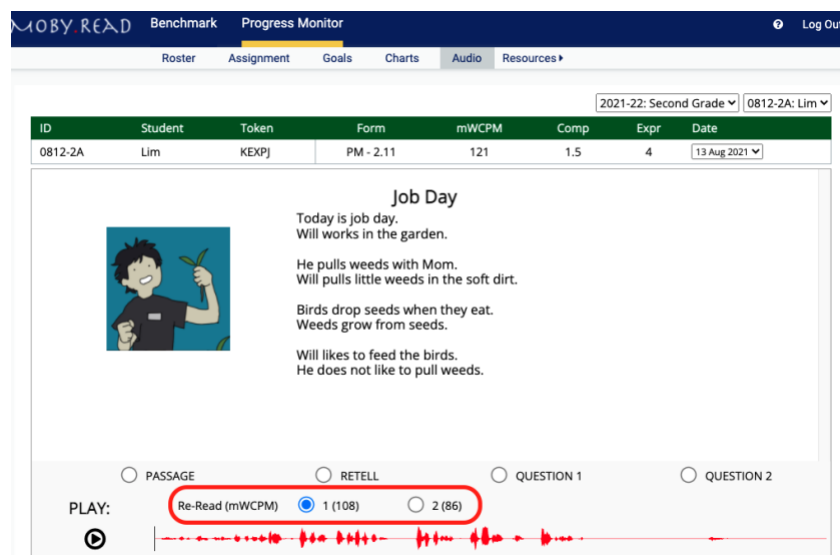

Figure 12: Progress Monitor re-read performances

Running Record Forms

You can conduct a running record analysis on all Progress Monitor read-aloud performances.

To download running record forms, select Printable Running Records from **Resources** on the top navigation menu. Select the Tier that contains the passage for your running record analysis and click **Download** (Figure 10). If needed, refer to the instructions for a detailed analysis, or a words correct per minute analysis, which are downloadable from the link below the check boxes.
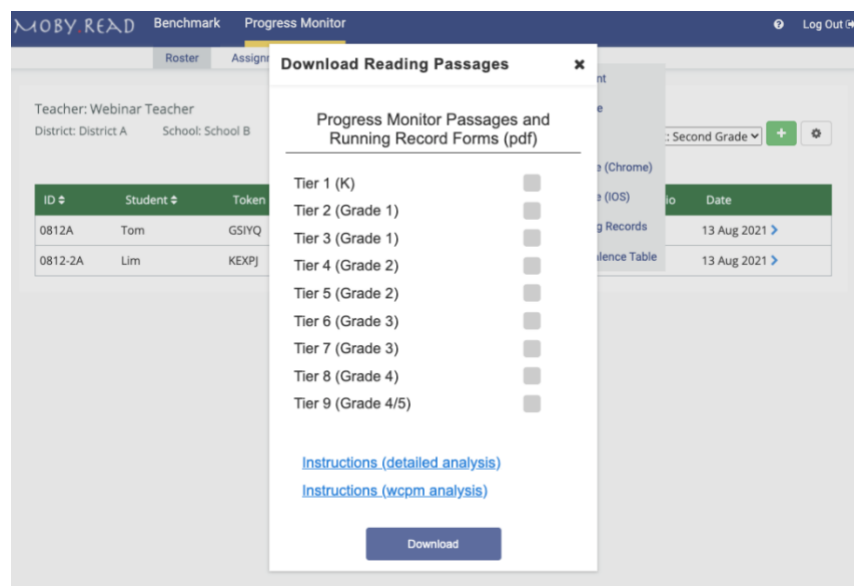
Figure 13: Downloading Progress Monitor running record forms

There are many ways in which you can use Moby.Read student recordings. For example, you can:

- Listen to a student's recordings from passage read alouds, retellings, and comprehension questions to develop a general understanding of how the student performed during the test, what skills the student is at grade level, and what type of additional practice or support the student would benefit from. You may use printable running record forms to do your own detailed analyses.

- Listen to the specific score categories to better understand a student's performance. For instance, if a student's comprehension score is low, listening to the recordings of retelling and short comprehension questions would help you understand why the student received a low comprehension score.

- Play audio recordings during parent-teacher conferences to give parents specific examples of a student's struggles or a student's progress over a period of time.

References

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For more information

Visit us at www.analyticmeasures.com/moby-read. Download related documentation here.
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