**STUDENT ASSESSMENTS AND ASSOCIATED GROWTH MODELS FOR TEACHER AND PRINCIPAL EVALUATION**

**FORM C**

# PUBLICLY AVAILABLE SERVICES SUMMARY

This form will be posted on the New York State Education Department's Web site and distributed through other means for all applications that are approved in conjunction with this RFQ to allow districts and BOCES to understand proposed offerings in advance of directly contacting Assessment Providers regarding potential further procurements.

| **Assessment Provider Information** | |
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| Name of Assessment Provider: | Houghton Mifflin Harcourt |
| Assessment Provider Contact Information: | 222 Berkeley Street<br>Boston, MA 02116<br>(617) 351-5000 |
| Name of Assessment: | The *Reading Inventory* |
| Nature of Assessment: | ☒ ASSESSMENT FOR USE WITH STUDENT LEARNING OBJECTIVES WITH A TARGET SETTING MODEL; OR<br><br>☐ SUPPLEMENTAL ASSESSMENT WITH AN ASSOCIATED GROWTH MODEL:<br>☐ GAIN SCORE MODEL<br>☐ GROWTH-TO-PROFICIENCY MODEL<br>☐ STUDENT GROWTH PERCENTILES<br>☐ PROJECTION MODELS<br>☐ VALUE-ADDED MODELS<br>☐ OTHER: |
| What are the grade(s) for which the assessment can be used to generate a 0-20 APPR score? | N/A |
| What are the subject area(s) for which the assessment can be used to generate a 0-20 APPR score? | N/A |
| What are the technology requirements associated with the assessment? | SAM is the learning management system and technology platform for all Enterprise Edition (EE) applications. EE applications take advantage of advances in technology and provide a platform for district-wide implementation of HMH programs.<br><br>SAM provides administrators with the ability to implement and monitor applications on a district-wide basis based on scalable technology, as well as district-wide capabilities such as district reporting, AYP demographic grouping and reporting, and AYP demographic filtering. SAM also provides teachers with multiple supports for data-driven instruction.<br><br>SAM Technology Platform<br>SAM and EE applications are built using Internet and industry-standard technology in order to provide for high |

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| | levels of concurrent usage and reliability. EE applications use standard Internet components that simplify setup and optimize issues surrounding student access to servers. Clients run in standard web browsers and connect to servers over HTTP or HTTPS.<br><br>The recommended system requirements outlined in the following sections are based on a certification process in which applications are put through a rigorous set of tests to determine their stability, performance, and compatibility with each other and with a wide variety of hardware and software environments. HMH lists requirements that have been tested and will be supported by HMH should issues arise. Noncertified configurations may be compatible with EE applications but HMH cannot guarantee support for these configurations.<br><br>Servers<br>All EE programs require a connection to a SAM Server. A SAM server combines the functions of an applications server (which runs the programs) with a database server (which manages and stores the data). In some implementations involving multiple SAM servers, an aggregation server may be deployed to pull together all student data from across the district into a single reporting database. All EE programs (including READ 180 Next Generation) use browser-based clients. Therefore, large media files (video, audio, animations) must be sent to the client over the network. To reduce network congestion, HMH recommends installing one or more HMH Media Accelerators (SMA).<br><br>The SMA is free software provided by HMH that sets up media caching on a district server.<br><br>System requirements for a SAM Server are as follows:<br>• Operating System:<br>- Macintosh® OS X Server 10.4.11 (Intel only) thru Macintosh OS X 10.6.8;<br>- Windows® Server 2003, 2008 (32 or 64 bit);<br>- Novell SUSE® Linux Enterprise Server 10 or 11 (32 bit).<br><br>HMH recommends the use of 64-bit operating systems.<br>• Memory: Minimum 4GB of RAM (more for higher concurrency levels)<br>• CPU: Minimum Intel Xeon dual-core (higher speed/more cores for higher concurrency levels)<br>• Hard Drive: Minimum 20 GB free space for single school servers, 200GB or more for large multischool servers.<br>• Internet: EE v2.0.x requires all SAM servers to have Internet access.<br><br>Customers hosting their EE applications from the HMH |

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| | Data Center do not require a SAM server in the district.<br><br>HMH recommends the use of multi-core Intel® Xeon® processors (or equivalent) operating at 2.0 GHz or better for servers. Faster processors, more cores, and more memory all contribute to the ability of the server to handle higher numbers of concurrent users and larger databases. EE v2.0.x programs have been certified for use with VMWare ESX.<br><br>HMH EE programs may be installed on virtual servers using virtualization software such as VMWare ESX. Resources for the HMH VM should be dedicated, not shared.<br><br>HMH EE programs are not supported on servers using the following operating systems:<br>• Windows 2000 Server, Windows NT<br>• Mac OS X Server 10.0 through 10.4.10.x<br>• Novell Netware<br>• Novell SUSE Linux Enterprise Server 9<br>• Novell SUSE Linux Enterprise Server 11 (64 bit)<br><br>HMH EE programs are not compatible with Power PC Macintosh computers or iPads.<br><br>For installations that serve a large number of concurrent users or 100,000+ active student accounts, additional application servers may be required.<br><br>Workstations<br>Enterprise Edition v2.0.x programs run on workstations that meet the following requirements:<br>Student Workstations<br>• Browser: Internet Explorer 7.x , 8.x or 9x, Safari 4.x or 5.x, or Firefox 3.x or later<br>• Operating System: Macintosh OS X 10.4.11 (Intel only) thru Macintosh OS X 10.6.8; Windows XP SP3, Windows Vista Professional, Windows 7 Professional<br>• Memory: 512MB to 1GB of RAM, based on OS version<br>• CPU: Intel dual-core or later (PPC Macs not supported)<br>• Network: Network Interface Card supporting TCP/IP (wireless networks, including 802.11a, 802.11g, or 802.11n, are supported, but application performance may be limited by the network's bandwidth capacity)<br>• Screen: 1024x768 resolution or higher<br>• Plug-ins: Flash 10.2 or later (set to allow the microphone), Adobe Reader or Adobe Acrobat 7 or later.<br><br>Teacher Workstations<br>• Browser: Internet Explorer 7.x 8.x or 9x, Safari 4.x or 5.x, or Firefox 3.x |

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| | • Operating System: Macintosh OS X 10.4.11 (Intel only) thru Macintosh OS X 10.6.8; Windows XP SP3, Windows Vista Professional, Windows 7 Professional<br>• Memory: 512MB to 1GB of RAM, based on OS version<br>• CPU: Intel dual-core or later (PPC Macs not supported)<br>• Network: Network Interface Card supporting TCP/IP (wireless networks, including 802.11a, 802.11g, or 802.11n, are supported, but application performance may be limited by the network's bandwidth capacity)<br>• Screen: 1024x768 resolution or higher<br>• Plug-ins: Flash 10.2 or later (set to allow the microphone), Adobe Reader or<br>Adobe Acrobat 7 or later<br><br>Thin Client workstations have not been certified and are not recommended for EE programs.<br><br>Enterprise Edition v2.0.x supports a wide range of client workstations running many different processors and operating systems. As a general rule, any workstation or laptop purchased in the last four years should be capable of running any Enterprise Edition application.<br><br>A Note Regarding Netbooks: In the past two years, netbooks (laptop-format miniature computers typically configured with an Intel Atom-class processor, Windows 7, Vista, or XP, reduced local storage, 1 GB of RAM and a small display) have been gaining in popularity. Some models of netbooks are able to run EE programs successfully. Other models are not compatible because of inadequate local storage, underpowered processors, or screens not capable of displaying a minimum resolution of 800 x 600 (READ 180, System 44® and HMH Phonics Inventory require a minimum of 1024 x 768). In particular, Linux-based netbooks or netbooks with a maximum screen resolution of 1024 x 576 are not suitable for use with EE programs. Because of persistent reports from customers of problems with netbooks from many manufacturers, HMH does not recommend the use of netbooks with EE programs.<br><br>Browser Settings<br>All workstation browsers must have the following settings enabled:<br>• Flash: Should be version 10.2 plug-in (enabled by default) and must not be disabled;<br>• Java: Should be JavaScript (enabled by default) and must not be disabled;<br>• Pop-Up Blockers: Must be disabled, or Student and Educator Access pages excepted;<br>• Security Level Settings: Default settings supported; IE Maximum Security levels not supported;<br>• Images Enabled: Default settings are supported; Image Display must not be turned off; |

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| | • Privacy Settings: Default settings supported; Maximum Privacy Setting (disabling cookies) not supported.<br>• Mixed Content (Hosted Customers): Should allow mixed content (e.g. http:// and https://).<br><br>Media Considerations<br>Starting with EE v2.0, media (CD or DVD-based media assets) must be installed on a server, not the individual student workstations. In small deployments, media may be served directly from the SAM server. For larger deployments where network bandwidth may be limited, the media may be installed on a media server close to the student workstations using a HMH Media Accelerator. HMH Media Accelerator (SMA) The HMH Media Accelerator (SMA) is new software that can be installed on a separate server and controls all media for EE programs by creating a cache server to allow for faster delivery of media over the network.<br><br>HMH recommends districts with low available bandwidth or districts that use HMH Hosting Services install the SMA. Additionally, districts with low available bandwidth and high concurrent usage of HMH programs may also wish to install the SMA. Districts that wish to move media traffic off of central servers should also consider installing the SMA. Districts should evaluate their deployment to determine if it is necessary to install the SMA, and to determine where it should be installed.<br><br>The SMA requires a server with the following characteristics:<br>• Operating System: Windows XP SP3, Windows 2003 or 2008; Macintosh OS X 10.5 or later<br>• Processor: Pentium 4 processor 2 GHz or higher; Intel-based Mac<br>• Memory: Minimum 2.0 GB of RAM<br>• Hard Drive: Minimum 25 GB available drive space<br>• Drive Speed: 7200 rpm drive recommended<br>• Network: 100 megabit, Gigabit ethernet recommended.<br><br>NOTE: SMA currently does not run on Linux-based servers. SMA servers cannot contain any traces of SAM software, therefore aggregation servers cannot double as SMA servers.<br><br>Concurrency<br>Concurrency refers to the number of simultaneous users that may be logged into a program before there is a noticeable reduction in the program's responsiveness.<br><br>For certification purposes, HMH benchmarks using a Quad-Core Xeon server with 16GB of RAM operating over a high-speed network. In this configuration, SAM is |

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| | capable of supporting 700 concurrent users in Fraction Nation®, 750 concurrent users in READ 180 and System 44, and 1000 concurrent users in all other applications. These benchmarks were established by simulating a district infrastructure with high-speed WAN, gigabit ethernet switch, and 100Base-T connections to all workstations from the servers described earlier.<br><br>These concurrence levels represent a best-case scenario. Real-world performance may be considerably lower as concurrency is affected by many factors, including:<br><br>• Network bandwidth across the enterprise<br>• Bandwidth utilization<br>• Packet prioritization availability<br>• Firewall configurations<br>• Processor speed on the server<br>• Server virtualization<br>• Available memory on the server<br>• Other server settings<br>• Content filtering settings<br>• Improperly configured virus protection software<br><br>In addition, concurrency is affected by running class, school, or district reports while students are using the applications. Impact from running reports is most noticeable when running large district-level reports or when a server is running near full capacity from student sessions. Therefore, HMH recommends running reports whenever possible outside of normal class time.<br><br>In testing, server performance was found to be comparable on Macintosh®, Windows®, and Linux® servers. To achieve highest levels of performance, multiple cores and a 64-bit OS (e.g., Windows 2008 64 bit) are required.<br><br>Bandwidth Requirements<br>As a rule of thumb, HMH recommends an average of 100 kbps of bandwidth per active workstation, bearing in mind that average, peak, and initial bandwidth requirements vary greatly depending on the product and the student, teacher, or administrator usage. For example, READ 180 uses only 4.4 kbps on average over a 20-minute session, but during Zone transitions in the software, as well as login and logging off, bandwidth can briefly spike to over 100 kbps. Similarly, uploading a long student recording will momentarily use significant bandwidth. Over a T3 connection (45 MB/s) this upload may only require a few milliseconds, but over a T1 connection (1.5 MB/s) the network could be saturated for several seconds.<br><br>No matter how fast a network you have between |

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| | workstation and server, if other bandwidth-intensive activities (VoIP, streaming video, audio downloads, database backups, etc.) are running anywhere on the network at the same time, performance on EE programs (including READ 180 Next Generation) may suffer.<br><br>For this reason, HMH recommends the use of packet shaping techniques on heavily trafficked networks.<br><br>EE programs operate over TCP/IP networks including wireless (802.11.a, g, n). When employing a wireless network, it is important not to overload the access point with too many connections, or student sessions may be dropped. HMH recommends using an industry-standard switched network for optimal performance. |
| Is the assessment available, either for free or through purchase, to other districts or BOCES in New York State? | ☒ YES<br><br>☐ NO |

**Please provide an overview of the assessment for districts and BOCES. Please include:**

- **A description of the assessment;**
- **A description of how the assessment is administered;**
- **A description of how scores are reported (include links to sample reports as appropriate);**
- **A description of how the Assessment Provider supports implementation of the assessment, including any technical assistance. (3 pages max)**

The *Reading Inventory* is a research-based, computer adaptive assessment for Grades K-12 that enables quick and accurate assessment of reading comprehension over time using the Lexile Framework for Reading®. The Framework was developed by Metametrics, an independent education company after 15 years of research funded by the National Institutes of Health. Administered in just 20 minutes, *Reading Inventory* provides concrete reliable feedback and actionable data to identify situations that call for intervention, set and evaluate progress toward proficiency goals, forecast performance, and differentiate instruction.

*Reading Inventory* supports the development of two essential elements of reading—Comprehension and Vocabulary. *Reading Inventory* is designed to measure how well students understand authentic literary and expository texts of varying and increasing degrees of difficulty. *Reading Inventory* measures reading comprehension by focusing on the skills readers use when studying written materials from various content areas. These skills include identifying details in a passage, identifying cause-and-effect relationships and the sequence of events, drawing conclusions, and making comparisons and generalizations.

Producing a natively-generated Lexile® score, *Reading Inventory* can be administered at any time during the school year. HMH recommends that *Reading Inventory* be administered 3-4 times a year, spacing assessments to allow time between tests for students to make gains through instruction and practice. HMH provides a Growth Expectations Guide tool that can be utilized to create individual goals for students and classrooms that reflect the learning needs of the students there. This method of individualized goal setting is likely most acceptable to teachers because it takes into account actual needs and gaps of students for whom they are instructionally responsible. A second rubric which summarizes classroom performance supports evaluation of the instructional effectiveness of a learning community or a principals' impact of instruction.

To learn more about Growth Expectations, please visit:
http://www.hmhco.com/products/assessment-solutions/assets/pdfs/sri/SRI_GrowthExpectations.pdf

*Reading Inventory* generates achievement reports disaggregating data by AYP/NCLB demographics with individual, class, school and/or district-wide reporting. Results are reported as both criterion-referenced and norm-referenced terms, indicating students' reading ability on the Lexile® scale and how their test results compare to those of other students. Administrators may choose to customize the number, name, and Lexile® range of the performance standards that are used for reporting *Reading Inventory* scores. The ability to adjust the performance standard proficiency bands allows educators to customize the reporting of *Reading Inventory* scores to specific district or state expectations.

HMH recommends a full-day *Reading Inventory* Implementation Training for teachers and administrators. This training provides tips for administering the classroom-based *Reading Inventory* test and using the data to target instruction and monitor reading progress. HMH can also provide implementation training by interactive Webinar and a full-day Train the Trainer implementation training to build district capacity. In addition, data coaching is available to help teachers and administrators customize and best utilize data for instruction and reporting requirements.

Technical online support is provided through the HMH Product Support web site. Downloadable manuals, tech bulletins, web chat and a searchable knowledgebase are available 24/7. Product Support is available at 1-800-558-8392.

To experience the *Reading Inventory* simulator, please visit:
https://literacysim.education.scholastic.com/reading_inv/index_standalone.html#/login

**Please provide an overview of the student-level growth model or target setting model for SLOs for districts and BOCES, along with how student-level growth scores are aggregated to the create teacher-level scores, and how those teacher-level scores are converted to New York State's 0-20 metric.**

Understanding how much Lexile growth a student might be expected to make on RI from fall to spring can help teachers determine whether students need additional challenge, targeted support, or intervention. The following three examples show how educators and administrators can use the growth expectation tables to set reading growth goals.

**Example 1: An On-Target Elementary School Student**

Cindy is a fifth-grade student. Her school has been monitoring her reading comprehension with RI since third grade, as delineated in Table 6. The first three columns of Table 6 show her grade level, the date of each RI administration, and her resulting Lexile measure.

**Table 6. Cindy's RI Fall Lexile Measure, Spring Lexile Measure, Expected Growth, and Actual Growth**

| Grade Level | Assessment Date | Fall Lexile Measure | Expected Growth | Actual Spring Lexile Measure | Actual Fall-Spring |
|---|---|---|---|---|---|
| 3 | Sept 2002 | 672L | 91L | 830L | 158 |
| 4 | Sept 2003 | 834L | 66L | 1064L | 230 |
| 5 | Sept 2004 | 1070L | 33L | 1242L | 172 |

To estimate the annual growth expectation for Cindy, her teacher first locates the grade level in Table A1 that corresponds to Cindy's Fall RI assessment, finds the row for her Fall Lexile measure, then identifies the growth expectation for that year. Again, the working definition of "growth expectation" is the amount of growth an average student at a particular Fall Lexile band in a particular grade can be expected to grow in one year, based on an empirical sample.

As shown in Table 6, the average growth at Cindy's Fall Lexile level for: Grade 3 is 91L; Grade 4 is 66L; Grade 5 is 33L.

The last two columns of Table 6 show the Spring Lexile measure that Cindy actually achieved at the end of the year, and her actual growth from fall to spring. By looking at these columns, we can see that Cindy has exceeded the growth expectation each year. Cindy's actual third-grade gain of 158L exceeded the average growth expectation for her initial Fall Lexile band. In fourth grade, Cindy made striking progress; her actual gain of 230L far exceeded the growth expectation compared to the average student in her fall band. She continued to outpace growth expectations in fifth grade, gaining 172L by the spring of fifth grade.

Overall, the numbers from Table A1 suggest that Cindy's reading level is consistently above average for her grade, and continues to grow more advanced as she progresses through school.

The teacher who observes this pattern should create a growth plan for Cindy that maintains her high-performing trajectory—for example, by helping her select more challenging reading material, exposing her to a variety of different genres, or helping her learn independent strategies for discerning word meaning and acquiring more sophisticated vocabulary. It should be noted that Cindy's teachers should not expect that Cindy will continue to grow at a rate of 100L-200L a year, as the empirical data in Table A1 reveals that older, more proficient students grow in smaller increments.

**Example 2: A Newcomer Middle School Student**

Juan is an 8th grade student in a middle school reading intervention program. He came to the U.S. three years ago from South America with minimal English language skills. The school has been monitoring his reading comprehension with RI since sixth grade. Table 7 shows Juan's Fall Lexile measures at each grade level, the growth expectation from Table A1, and actual Fall-to-Spring growth. The table also shows the additional Lexile gain Juan would have needed to achieve each year to perform at the 50th percentile for his grade in the spring.

**Table 7. Juan's RI Performance, Fall Lexile Measure, Spring Lexile Measure, Expected Growth, and Actual Growth**

| Grade Level | Assmt Date | Fall | Expected Growth | Actual Spring Lexile Measure | Actual Fall-Spring Growth | 50th Percentile Spring Lexile Measure | Additional Growth Needed to Reach 50th Percentile |
|---|---|---|---|---|---|---|---|
| 6 | Sept 2002 | BR | 304L | 420L | 420L | 880L | 460L |
| 7 | Sept 2003 | 520 | 96L | 640L | 120L | 955L | 315L |
| 8 | Sept 2004 | 695 | 73L | 753L | 58L | 1000L | 247L |

To estimate the growth expectation for Juan using Table A1, his teacher follows the same procedure as in the first example. The teacher locates his grade level in the first column, his Fall Lexile measure in the second column, and his expected growth in the last column. Using this procedure, the teacher can see that a sixth-grade Fall RI performance of BR (Beginning Reader) corresponds with an expected growth of 304L. For seventh and eighth grades, Table A1 indicates that average expected growth at Juan's initial Lexile level is 96L and 73L, respectively.

Table 7 also shows the actual Spring Lexile measures that Juan achieved each year, along with his actual Fall-Spring Growth. Comparing Juan's actual growth to the growth expectation, his teacher can see that his Lexile growth exceeded the growth expectation in sixth grade, and was slightly higher than the expectation in seventh grade. In eighth grade, Juan's actual gain of 58L was 15L below the growth expectation of 73L.

A teacher monitoring his progress could conclude that Juan made significant progress in reading in sixth grade, and his growth stayed on track in seventh grade, but then lagged behind what would have been expected for the average student scoring in his Fall Lexile band in eighth grade. The teacher needs to investigate reasons for Juan's slowing progress in eighth grade and determine whether he needs a different or more intensive intervention.

The last column in Table 7, Additional Growth Needed to Reach 50th Percentile, provides additional information about setting growth goals for a student like Juan in an intervention program. The table shows that although Juan's annual progress moved him far out of the Beginning Reader range, by eighth grade his Spring Lexile measure of 753L was still below grade-level performance (1000L at the 50th percentile for eighth grade). According to the last column, to achieve median performance for his grade level Juan would have had to gain an additional 460L in sixth grade, 315L in seventh grade, and 247L in eighth grade. By considering the amount of growth necessary for individual students to reach the 50th percentile, teachers can assess whether students in intervention programs are accelerating toward on-grade-level

reading achievement, and create a growth plan that will help them make the necessary progress.

**Example 3: A Ninth-Grade Intervention Class**
Ms. Jackson is a reading specialist who teaches a Tier II intervention class in a high school. To aid with her planning prior to the start of the school year, she wants to determine approximately how much growth she can expect from students in each grade. For her tenth-grade intervention class, she has student data from the previous school year to help with her estimation. However, for the ninth-grade class She has no prior-year data. In order to determine average growth expectations for her ninth-grade students, Ms. Jackson turns to Table A1.

Ms. Jackson knows that students identified for Tier II intervention are typically performing in the Below Basic performance level on RI. According to the RI Technical Guide (Scholastic Inc., 2007, p. 36), in ninth grade, RI Lexile measures of 649L and below are considered Below Basic. Therefore, Ms. Jackson finds the ninth-grade section of Table A1 and locates the 650L Fall Lexile band in the "Fall Lexile Measure" column. Following this row across, she sees that the expected Spring Lexile measure for this band is 717L, and average growth is 68L. Based on this information, Ms. Jackson has in mind that she will want her students to exceed a minimum growth goal of 68L for the year.
Next, Ms. Jackson uses Appendix C (below) to look up the mean Spring Lexile measure for ninth graders performing at the 50th percentile for their grade. The table indicates that in the spring, the average performance for ninth graders at the 50th percentile is 1045L. Therefore, a ninth grader starting in the Below Basic performance level—649L to BR (0L)—would have to grow by a range of 396L to 1045L in order to reach the grade-level target.

Given this information, although Ms. Jackson expects a minimum gain of 68L from her ninth graders, her aim is to use intensive intervention to help students make three or four times that growth in order to accelerate them toward grade-level performance. This example also highlights the fact that for students who are reading far below grade level, even if they make substantial progress each year they may require two or more years of intensive intervention to achieve grade-level goals.

**Appendix C - Table C1.**
**Performance Standard Proficiency Bands for RI, in Lexiles, by Grade**

| Grade | Below Basic | Basic | Proficient | Advanced |
|---|---|---|---|---|
| 1 | — | 99 and below | 100 to 400 | 401 and Above |
| 2 | 99 and Below | 100 to 299 | 300 to 600 | 601 and Above |
| 3 | 249 and Below | 250 to 499 | 500 to 800 | 801 and Above |
| 4 | 349 and Below | 350 to 599 | 600 to 900 | 901 and Above |
| 5 | 449 and Below | 450 to 699 | 700 to 1000 | 1001 and Above |
| 6 | 499 and Below | 500 to 799 | 800 to 1050 | 1051 and Above |
| 7 | 549 and Below | 550 to 849 | 850 to 1100 | 1101 and Above |
| 8 | 599 and Below | 600 to 899 | 900 to 1150 | 1151 and Above |
| 9 | 649 and Below | 650 to 999 | 1000 to 1200 | 1201 and Above |
| 1 | 699 and Below | 700 to 1024 | 1025 to 1250 | 1251 and Above |
| 1 | 799 and Below | 800 to 1049 | 1050 to 1300 | 1301 and Above |

*Note: The original standards for Grade 2 were revised by Scholastic Inc. (December 1999) and are presented above. The original standards for Grades 9, 10, and 11 were revised by Scholastic Inc. (January 2000) and are presented above.*

The percentage of students meeting or exceeding their Reading Inventory growth goal can then be entered into the NYSED 0-20 metric system in order for ratings to be determined.

Additional information can be found by visiting the Reading Inventory Growth Paper here: ***http://www.hmhco.com/products/assessment-solutions/assets/pdfs/sri/SRI_GrowthExpectations.pdf***

| **New York State Next Generation Assessment Priorities**<br>Please provide detail on how the proposed supplemental assessment l or assessment to be used with SLOs addresses each of the Next Generation Assessment Priorities below. | |
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| **Characteristics of Good ELA and Math Assessments (only applicable to ELA and math assessments):** | N/A |
| **Assessments Woven Tightly Into the Curriculum:** | NA |
| **Performance Assessment:** | As a proven research-based assessment of foundational reading and comprehension skills *Reading Inventory* provides actionable data that can be used for screening students and identifying performance-level skills, as well as supporting benchmarking, growth monitoring and evaluating program effectiveness. *Reading Inventory* helps educators identify and support students who need intervention. The Foundation Reading assessment monitors reading development in the early years. The subtest identifies readers who are not meeting grade-level expectations, ensuring that those students are flagged for additional support during this key period in their reading development, thus keeping them from requiring more intensive intervention later on. The Reading Comprehension Assessment can be used to identify older readers who are struggling with comprehension and may require intensive levels of intervention, especially those students who are two or more years behind grade level. The Reading Comprehension Assessment provides accurate screening, placement, and growth monitoring for all tiers of instruction |
| **Efficient Time-Saving Assessments:** | HMH *Reading Inventory* is a large scale, whole group, adaptive assessment of reading ability and comprehension. Group administered in 30 minutes, 3-5 times per year. One of the most powerful features of *Reading Inventory* is its ability to generate data that can be immediately used in the classroom to monitor and assess student progress. SAM organizes and analyzes the results gathered from student tests, and presents this information in a series of clear, understandable reports that will help track reading growth over time and evaluate progress toward performance goals. |

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| **Technology:** | SAM is the learning management system and technology platform for all Enterprise Edition (EE) applications. EE applications take advantage of advances in technology and provide a platform for district-wide implementation of HMH programs.<br><br>SAM provides administrators with the ability to implement and monitor applications on a district-wide basis based on scalable technology, as well as district-wide capabilities such as district reporting, AYP demographic grouping and reporting, and AYP demographic filtering. SAM also provides teachers with multiple supports for data-driven instruction.<br><br>**SAM Technology Platform**<br>SAM and EE applications are built using Internet and industry-standard technology in order to provide for high levels of concurrent usage and reliability. EE applications use standard Internet components that simplify setup and optimize issues surrounding student access to servers. Clients run in standard web browsers and connect to servers over HTTP or HTTPS.<br><br>The recommended system requirements outlined in the following sections are based on a certification process in which applications are put through a rigorous set of tests to determine their stability, performance, and compatibility with each other and with a wide variety of hardware and software environments. HMH lists requirements that have been tested and will be supported by HMH should issues arise. Noncertified configurations may be compatible with EE applications but HMH cannot guarantee support for these configurations.<br><br>**Servers**<br>All EE programs require a connection to a SAM Server. A SAM server combines the functions of an applications server (which runs the programs) with a database server (which manages and stores the data). In some implementations involving multiple SAM servers, an aggregation server may be deployed to pull together all student data from across the district into a single reporting database. All EE programs (including READ 180 Next Generation) use browser-based clients. Therefore, large media files (video, audio, animations) must be sent to the client over the network. To reduce network congestion, HMH recommends installing one or more HMH Media Accelerators (SMA).<br><br>The SMA is free software provided by HMH that sets up media caching on a district server.<br><br>System requirements for a SAM Server are as follows:<br>• Operating System: |

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| | - Macintosh® OS X Server 10.4.11 (Intel only) thru Macintosh OS X 10.6.8;<br>- Windows® Server 2003, 2008 (32 or 64 bit);<br>- Novell SUSE® Linux Enterprise Server 10 or 11 (32 bit).<br><br>HMH recommends the use of 64-bit operating systems.<br>• Memory: Minimum 4GB of RAM (more for higher concurrency levels)<br>• CPU: Minimum Intel Xeon dual-core (higher speed/more cores for higher concurrency levels)<br>• Hard Drive: Minimum 20 GB free space for single school servers, 200GB or more for large multischool servers.<br>• Internet: EE v2.0.x requires all SAM servers to have Internet access.<br><br>Customers hosting their EE applications from the HMH Data Center do not require a SAM server in the district.<br><br>HMH recommends the use of multi-core Intel® Xeon® processors (or equivalent) operating at 2.0 GHz or better for servers. Faster processors, more cores, and more memory all contribute to the ability of the server to handle higher numbers of concurrent users and larger databases. EE v2.0.x programs have been certified for use with VMWare ESX.<br><br>HMH EE programs may be installed on virtual servers using virtualization software such as VMWare ESX. Resources for the HMH VM should be dedicated, not shared.<br><br>HMH EE programs are not supported on servers using the following operating systems:<br>• Windows 2000 Server, Windows NT<br>• Mac OS X Server 10.0 through 10.4.10.x<br>• Novell Netware<br>• Novell SUSE Linux Enterprise Server 9<br>• Novell SUSE Linux Enterprise Server 11 (64 bit)<br><br>HMH EE programs are not compatible with Power PC Macintosh computers or iPads.<br><br>For installations that serve a large number of concurrent users or 100,000+ active student accounts, additional application servers may be required.<br><br>**Workstations**<br>Enterprise Edition v2.0.x programs run on workstations that meet the following requirements:<br>Student Workstations<br>• Browser: Internet Explorer 7.x , 8.x or 9x, Safari 4.x or 5.x, or Firefox 3.x or later<br>• Operating System: Macintosh OS X 10.4.11 (Intel only) |

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| | thru Macintosh OS X 10.6.8; Windows XP SP3, Windows Vista Professional, Windows 7 Professional<br>• Memory: 512MB to 1GB of RAM, based on OS version<br>• CPU: Intel dual-core or later (PPC Macs not supported)<br>• Network: Network Interface Card supporting TCP/IP (wireless networks, including 802.11a, 802.11g, or 802.11n, are supported, but application performance may be limited by the network's bandwidth capacity)<br>• Screen: 1024x768 resolution or higher<br>• Plug-ins: Flash 10.2 or later (set to allow the microphone), Adobe Reader or Adobe Acrobat 7 or later.<br><br>**Teacher Workstations**<br>• Browser: Internet Explorer 7.x 8.x or 9x, Safari 4.x or 5.x, or Firefox 3.x<br>• Operating System: Macintosh OS X 10.4.11 (Intel only) thru Macintosh OS X 10.6.8; Windows XP SP3, Windows Vista Professional, Windows 7 Professional<br>• Memory: 512MB to 1GB of RAM, based on OS version<br>• CPU: Intel dual-core or later (PPC Macs not supported)<br>• Network: Network Interface Card supporting TCP/IP (wireless networks, including 802.11a, 802.11g, or 802.11n, are supported, but application performance may be limited by the network's bandwidth capacity)<br>• Screen: 1024x768 resolution or higher<br>• Plug-ins: Flash 10.2 or later (set to allow the microphone), Adobe Reader or Adobe Acrobat 7 or later<br><br>Thin Client workstations have not been certified and are not recommended for EE programs.<br><br>Enterprise Edition v2.0.x supports a wide range of client workstations running many different processors and operating systems. As a general rule, any workstation or laptop purchased in the last four years should be capable of running any Enterprise Edition application.<br><br>A Note Regarding Netbooks: In the past two years, netbooks (laptop-format miniature computers typically configured with an Intel Atom-class processor, Windows 7, Vista, or XP, reduced local storage, 1 GB of RAM and a small display) have been gaining in popularity. Some models of netbooks are able to run EE programs successfully. Other models are not compatible because of inadequate local storage, underpowered processors, or screens not capable of displaying a minimum resolution of 800 x 600 (READ 180, System 44® and HMH Phonics Inventory require a minimum of 1024 x 768). In particular, Linux-based netbooks or netbooks with a maximum screen resolution of 1024 x 576 are not suitable for use with EE programs. Because of persistent reports from |

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| | customers of problems with netbooks from many manufacturers, HMH does not recommend the use of netbooks with EE programs.<br>**Browser Settings**<br>All workstation browsers must have the following settings enabled:<br>• Flash: Should be version 10.2 plug-in (enabled by default) and must not be disabled;<br>• Java: Should be JavaScript (enabled by default) and must not be disabled;<br>• Pop-Up Blockers: Must be disabled, or Student and Educator Access pages excepted;<br>• Security Level Settings: Default settings supported; IE Maximum Security levels not supported;<br>• Images Enabled: Default settings are supported; Image Display must not be turned off;<br>• Privacy Settings: Default settings supported; Maximum Privacy Setting (disabling cookies) not supported.<br>• Mixed Content (Hosted Customers): Should allow mixed content (e.g. http:// and https://).<br><br>**Media Considerations**<br>Starting with EE v2.0, media (CD or DVD-based media assets) must be installed on a server, not the individual student workstations. In small deployments, media may be served directly from the SAM server. For larger deployments where network bandwidth may be limited, the media may be installed on a media server close to the student workstations using a HMH Media Accelerator. HMH Media Accelerator (SMA) The HMH Media Accelerator (SMA) is new software that can be installed on a separate server and controls all media for EE programs by creating a cache server to allow for faster delivery of media over the network.<br><br>HMH recommends districts with low available bandwidth or districts that use HMH Hosting Services install the SMA. Additionally, districts with low available bandwidth and high concurrent usage of HMH programs may also wish to install the SMA. Districts that wish to move media traffic off of central servers should also consider installing the SMA. Districts should evaluate their deployment to determine if it is necessary to install the SMA, and to determine where it should be installed.<br><br>The SMA requires a server with the following characteristics:<br>• Operating System: Windows XP SP3, Windows 2003 or 2008; Macintosh OS X 10.5 or later<br>• Processor: Pentium 4 processor 2 GHz or higher; Intel-based Mac<br>• Memory: Minimum 2.0 GB of RAM<br>• Hard Drive: Minimum 25 GB available drive space |

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| | • Drive Speed: 7200 rpm drive recommended<br>• Network: 100 megabit, Gigabit ethernet recommended.<br><br>NOTE: SMA currently does not run on Linux-based servers. SMA servers cannot contain any traces of SAM software, therefore aggregation servers cannot double as SMA servers.<br><br>**Concurrency**<br>Concurrency refers to the number of simultaneous users that may be logged into a program before there is a noticeable reduction in the program's responsiveness.<br><br>For certification purposes, HMH benchmarks using a Quad-Core Xeon server with 16GB of RAM operating over a high-speed network. In this configuration, SAM is capable of supporting 700 concurrent users in Fraction Nation®, 750 concurrent users in READ 180 and System 44, and 1000 concurrent users in all other applications. These benchmarks were established by simulating a district infrastructure with high-speed WAN, gigabit ethernet switch, and 100Base-T connections to all workstations from the servers described earlier.<br><br>These concurrence levels represent a best-case scenario. Real-world performance may be considerably lower as concurrency is affected by many factors, including:<br><br>• Network bandwidth across the enterprise<br>• Bandwidth utilization<br>• Packet prioritization availability<br>• Firewall configurations<br>• Processor speed on the server<br>• Server virtualization<br>• Available memory on the server<br>• Other server settings<br>• Content filtering settings<br>• Improperly configured virus protection software<br><br>In addition, concurrency is affected by running class, school, or district reports while students are using the applications. Impact from running reports is most noticeable when running large district-level reports or when a server is running near full capacity from student sessions. Therefore, HMH recommends running reports whenever possible outside of normal class time.<br><br>In testing, server performance was found to be comparable on Macintosh®, Windows®, and Linux® servers. To achieve highest levels of performance, multiple cores and a 64-bit OS (e.g., Windows 2008 64 bit) are required. |

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| | **Bandwidth Requirements**<br>As a rule of thumb, HMH recommends an average of 100 kbps of bandwidth per active workstation, bearing in mind that average, peak, and initial bandwidth requirements vary greatly depending on the product and the student, teacher, or administrator usage. For example, READ 180 uses only 4.4 kbps on average over a 20-minute session, but during Zone transitions in the software, as well as login and logging off, bandwidth can briefly spike to over 100 kbps. Similarly, uploading a long student recording will momentarily use significant bandwidth. Over a T3 connection (45 MB/s) this upload may only require a few milliseconds, but over a T1 connection (1.5 MB/s) the network could be saturated for several seconds.<br><br>No matter how fast a network you have between workstation and server, if other bandwidth-intensive activities (VoIP, streaming video, audio downloads, database backups, etc.) are running anywhere on the network at the same time, performance on EE programs (including READ 180 Next Generation) may suffer.<br><br>For this reason, HMH recommends the use of packet shaping techniques on heavily trafficked networks.<br><br>EE programs operate over TCP/IP networks including wireless (802.11.a, g, n). When employing a wireless network, it is important not to overload the access point with too many connections, or student sessions may be dropped. HMH recommends using an industry-standard switched network for optimal performance. |
| **Degree to which the growth model must differentiate across New York State's four levels of teacher effectiveness (only applicable to supplemental assessments):** | N/A |

**STUDENT ASSESSMENTS FOR TEACHER AND PRINCIPAL EVALUATION**

**FORM H**

# APPLICANT CERTIFICATION FORM –ASSESSMENTS FOR USE WITH STUDENT LEARNING OBJECTIVES

Please read each of the items below and check the corresponding box to ensure the fulfillment of the technical criteria.

PLEASE SUBMIT ONE "FORM H" FOR EACH APPLICANT. CO-APPLICANTS SHOULD SUBMIT SEPARATE FORMS.

The Applicant makes the following assurances:

| Assurance | Check each box: |
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| The assessment is rigorous, meaning that it is aligned to the New York State learning standards or, in instances where there are no such learning standards that apply to a subject/grade level, alignment to research-based learning standards. | X |
| To the extent practicable, the assessment must be valid and reliable as defined by the Standards of Educational and Psychological Testing. | X |
| The assessment can be used to measure one year's expected growth for individual students. | X |
| For K-2 assessments, the assessment is not a "Traditional Standardized Assessment" as defined in Section 1.3 of this RFQ. | X |
| For assessments previously used under Education Law §3012-c, the assessment results in differentiated student-level performance. If the assessment has not produced differentiated results in prior school years, the applicant assures that the lack of differentiation is justified by equivalently consistent student results based on other measures of student achievement. | X |
| For assessments not previously used in teacher/principal evaluation, the applicant has a plan for collecting evidence of differentiated student results such that the evidence will be available by the end of each school year. | ☐ |
| At the end of each school year, the applicant will collect evidence demonstrating that the assessment has produced differentiated student-level results and will provide such evidence to the Department upon request.[4] | X |

[4] Please note, pursuant to Section 2.3 of this RFQ, an assessment may be removed from the approved list if such assessment does not comply with one or more of the criteria for approval set forth in this RFQ

**To be completed by the Copyright Owner/Assessment Representative of the assessment being proposed and, where necessary, the co-applicant LEA:**

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| Houghton Mifflin Harcourt<br>1. Name of Organization (PLEASE PRINT/TYPE) |  <br>4. Signature of Authorized Representative (PLEASE USE **BLUE** INK) |
| Kathy Bull<br>2. Name of Authorized Representative (PLEASE PRINT/TYPE) | 05/26/2016<br>5. Date Signed |
| Sr. Director, RFP & Technical Marketing<br>3. Title of Authorized Representative (PLEASE PRINT/TYPE) | |

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| N/A<br>1. Name of LEA (PLEASE PRINT/TYPE) | 4. Signature of School Representative (PLEASE USE **BLUE** INK) |
| 2. School Representative's Name (PLEASE PRINT/TYPE) | 5. Date Signed |
| 3. Title of School Representative (PLEASE PRINT/TYPE) | |