Attachment A
Minnesota Assessment System Scope of Work

1. PROJECT PLANNING AND COMMUNICATION

Task ID	Work Task
1.1	**Major Project Activities**
1.1.1	The vendor will meet the MDE-agreed upon and approved time lines and requirements for the implementation of the Minnesota Assessments.
1.1.2	The vendor will follow principles set forth in the Standards for Educational and Psychological Testing, American Psychological Association, National Council on Measurement in Education and Code of Professional Responsibilities in Educational Measurement.
1.1.3	The vendor will work with MDE to adopt applicable principles set forth in the Operational Best Practices for Statewide Large Scale Assessment Programs developed by CCSSO and ATP.
1.1.4	The vendor will adhere to the federal Family Educational Rights and Privacy Act Regulations Title 34, Part 99.
1.1.5	The vendor employees and temporary staff are expected to adhere to strict security and confidentiality requirements²and will be enforced at all phases²from item development and test construction through forms construction, proofreading, and printing to distribution, collection, scoring and reporting.
1.1.6	The vendor will maintain the MDE/Vendor Directory and Communication Guidelines. The vendor will notify MDE of any staff changes and include name, title, and contact information. MDE retains the right to approve any changes to leads assigned to the project. A change in scope that necessitates additional staff or reduction in staff will require approval of staff by MDE.
1.1.7	The vendor will develop and deliver final risk analysis: 1) specific to administration, scoring, and reporting a minimum of three weeks prior to an administration window opening and 2) specific to personnel and budget by January 1st of each year.
1.1.8	The vendor will develop and maintain an issues log that all project members have easy access to. An issues log details all open and closed questions for cross-project (and individual projects where appropriate) systems.
1.1.9	The vendor will provide a process for escalating issues of potential late deliverables or quality issues to avoid either.
1.1.10	The vendor will provide cost options estimates as quickly as an hour from request for a variety of scenarios for legislative requests and MDE planning purposes.
1.1.11	Schedules
1.1.11.1	Beginning 30 days after contract award, the vendor will produce a milestone schedule / project overview no less than a month before a project (e.g., MCA Reading/Math, MCA Science, MCA-Modified, MTAS, GRAD) begins that concentrates on the sequence of major events that are dependent within a project to determine if there are any obstacles to successfully completing the project with high quality.
1.1.11.2	The vendor will create a detailed project schedule in a common software and using MDE terminology to be provided to MDE for input and final approval before the start of any tasks for a project year (e.g., For a spring paper administration - February for test construction, April for Administration and July for reporting). Schedules will be complete and address all phases of the projects and be maintained throughout the project year.
1.1.11.3	Schedules will be developed by the vendor so resource overlap is not experienced at MDE or justification of why overlap cannot be avoided is provided

Task ID	Work Task
	to MDE. Schedules must sort by resource tasks, incomplete tasks, by date ranges, or other configurations that make the schedule usable for all users. Individual project schedules must roll up into a master project schedule.
1.1.11.4	The vendor and MDE will review schedules weekly to confirm handoff and deliverable dates agree and are on target for completion. The schedules will have indicators noting any slippage or any change to a task that causes slippage to MDE or a change in deliverables to districts. Vendor will provide reason for slippage and resolution for correction. The weekly review will also identify if changes need to be made for the next year's schedule for these tasks and be recorded within the schedule.
1.1.12	Meetings and Conference Calls
1.1.12.1	The vendor will facilitate weekly project and across-project conference calls. An agenda with upcoming deliverables and status information will be provided by the vendor no later than 48 hours before the call asking for MDE review and additional topics. Minutes will be provided in writing by the vendor within 24 hours of the call. The project conference calls will include any open issues and status. Leads from functional areas that are active during the course of a project should attend the conference call so issues can be resolved expeditiously. Vendor should use the agenda/minutes as one input that helps to direct future and ongoing activities. Agendas and minutes will use the same format across all projects.
1.1.12.2	The vendor will write draft minutes in a format determined by MDE for all face-to-face meetings and submit them to MDE within five business days. In the case of meetings with multiple vendors, vendors will alternate between a primary and secondary minute taker. Secondary will provide their notes to the primary and primary will consolidate for delivery to MDE. MDE will provide edits and/or approval before minutes are considered final.
1.1.12.3	The vendor will produce minutes that concisely capture and summarize the discussion, decisions, action items and due dates.
1.1.12.4	The vendor will solicit feedback from districts via debrief meetings or other method and incorporate suggestions that improve the program and are agreed upon by MDE.
1.1.12.5	The vendor will plan and facilitate debrief meetings following an activity such as test development/construction, administration and reporting to identify areas of improvement. Suggestions for changes will be documented in a method (e.g., status calls) that does not allow the improvement to be missed in the coming year.
1.1.12.6	The vendor staff will work collaboratively to build and maintain consistency across projects This may also include quarterly meetings with MDE to review existing processes and development of products.
1.2	**Customer Service**
1.2.1	The vendor will respond to MDE requests and questions via email or voicemail in the same day or by timeline requested. If an answer is not available the vendor will provide an acknowledgment and estimated date an answer will be provided to MDE.
1.2.2	The vendor will have Customer Service Representatives (CSRs), trained specifically by Vendor program staff knowledgeable about the Minnesota Assessments to respond to MN school and district phone calls, e-mail, and correspondence. The CSR will be able to identify questions that are policy and belong to MDE and those that are to be answered by vendor. Accurate information needs to be readily and quickly available to CSR staff. Changing information needs to be provided to CSR immediately. The vendor will have a documented process in place to keep CSR staff informed of Minnesota specific information.
1.2.3	The vendor will monitor the accuracy of responses by CSR through supervisory monitoring, district or state feedback or other method and provide retraining as necessary. Vendor will provide weekly reports to MDE during peak times. Reports will include volume, wait time and instances of incorrect

Task ID	Work Task
	responses by CSR.
1.2.4	Toll-free telephone lines will be staffed by the vendor Monday ± Friday from 7 a.m. to 4:30 p.m. Central Time and on Saturday over the weekends of GRAD retesting windows from 7:00 AM ± noon Central Time.
1.2.5	Calls will be answered by vendor with an average wait time of no more than 20 seconds. Any voice mail messages left for Customer Service before or after regular hours will be returned within two business hours.
1.2.6	Online issues that cannot be resolved by vendor CSR immediately will be transferred to vendor's technical support. Technical support will work with the district until resolution is identified. If a district is calling with a technical issue and students are in the classroom unable to test, the call is to be moved to technical support immediately for resolution or provide recommendation to have students test at a later time if problem can't be resolved. Students should not be kept in a classroom for more than 15 minutes waiting for resolution if not agreed upon by the district.
1.2.7	The vendor will respond to calls that are transferred to internal staff (e.g., Project Management) within 2 hours. Vendor will respond to caller requests and questions within one business day with a resolution or notification that the vendor is still working on the issue. If an answer is not available, status will be provided periodically until an answer is provided.
1.2.8	When the vendor experiences difficulties with online system (i.e., server down), the vendor shall notify MDE, and a voice mail blast and/or an email notice will be sent to districts alerting them to the issue as soon as directed by MDE. The Vendor shall draft template messages to be available for this purpose. Vendor will provide a URL for a system status webpage that must reflect current status. Vendor will also provide a list serve for users to register that will provide an auto e-mail notification when there are system issues. Updates will occur as system status changes.
1.2.9	The vendor will have staff knowledgeable about online testing to support districts experiencing technical difficulties. If situation warrants and MDE and Vendor agree a site visit by vendor will occur within twenty-four hours or as agreed by district. In cases where the onsite staff is unable to resolve the issue within 48 hours vendor will arrange for a higher skilled staff to visit and resolve the issue.
1.2.10	The vendor will provide one email address for districts to make inquiries and will respond to district emails same day if received by 4 PM with response or acknowledgement of receiving email.
1.2.11	The vendor will maintain a database/log of emails and calls with the questions. This database will provide historical information regarding who called or emailed and the topic. Summaries of numbers and types of contacts and responses will be sent to the MDE at the end of each project cycle, or upon request.
1.2.12	The vendor will develop and maintain a Frequently Asked Questions document or database that will be available for reference by project staff and CSR ± and will be available to MDE and districts in an easily searchable format. The FAQs must be finalized three months before the scheduled activity, except through February 2012 when they must be available to MDE during UAT and finalized within 10 days after UAT. These FAQs will be cross-project, succinct, easy to read and be grammatically correct
1.2.13	The vendor will maintain email addresses for various groups such as the District Assessment Coordinator and Technology Coordinators to allow for quick dissemination of information.
1.2.14	The vendor will mail, fax, email, or ship other correspondence, such as reminder memos, to district assessment coordinators and MDE. The vendor will receive MDE approval prior to distribution to districts. The vendor will inform MDE which district contact group or groups the correspondence is being sent. For the reminder emails to districts about key dates such as windows closing or ordering materials the vendor will provide MDE the schedule for

Task ID	Work Task
	creating correspondence, receiving MDE approval, and distribution time.
1.3	**Miscellaneous Support**
1.3.1	The vendor will provide toll-free call in numbers for Minnesota assessment use. Call in numbers will be used for meetings between MDE, vendor and districts. Some numbers will be provided for use between MDE and vendor only. This will provide security when using these numbers
1.3.2	The vendor will provide and maintain a secure FTP site, or equivalent approved by MDE, for use of posting secure information between MDE and the vendor and other parties as requested by MDE. This site will be maintained so that it is used for file transfer and not file storage.
1.3.3	The vendor will provide a limited access site for shared documents such as the issues log(s). The vendor shall provide logons to all persons identified by MDE. The site should have a check out feature so a document is not being edited by more than one person at a time.
1.3.4	The vendor will provide MDE with an account number and shipping materials for the shipping company of its choice to provide for overnight shipment of secure materials for the Minnesota Assessment System.
1.3.5	The vendor will not send student data via email. Student data will be password protected and posted on the ftp site.
1.3.6	The vendor will make available and use the online registration system such as Cvent as described under Advisory Panel Meetings for other meetings such as workshops and training sessions. To facilitate startup and avoid data transfer errors, MDE will arrange for the transfer of the current Cvent data to vendor.
1.3.7	The vendor will hire and reimburse state-approved American Sign Language interpreters as requested for advisory panels or training meetings averaging no more than three times a year for one day each.
1.3.8	The vendor will provide input to and review of the weekly Assessment Update distributed by MDE.
1.3.9	The vendor will have electronic means (not faxing) to collect information from districts such as signing up for training or when soliciting information.
1.3.10	Vendor will invoice districts/schools for ABE, home schooled and private school students using the assessments. A report of the number invoiced will be provided to MDE before the final invoice of the year. GRAD requires a report quarterly. Vendor will collect payment and subtract total from final payment.
1.3.11	At the start of the contract the vendor will develop and maintain a transitional plan in the event that the incumbent does not retain the contract and work is transferred to another vendor. Deliverables on this plan will be provided September 1 of each year.
1.3.12	The vendor will provide upon request a student's score information and actual response (image of answer document or replication of online assessment) within five business days for parent review requests.
1.4	**Training**
1.4.1	The vendor will work closely with MDE staff and any advisory committees or educators to ensure the materials are appropriate for the intended audience and approved by MDE.
1.4.2	All training materials will be first prepared by the vendor and then reviewed collaboratively by the vendor and MDE staff for any necessary revisions unless specified differently by MDE.
1.4.3	The vendor is responsible for both preparing and presenting 10 annual live presentations/trainings (1.4.4) and 20 e-learning modules (1.4.5) over the course of the contract. The vendor must have staff that is effective and experienced at presenting to adult learners. It is important to MDE that a professional and competent image is developed and maintained through the vendor.

Task ID	Work Task
1.4.4	The vendor will conduct up to ten distinct sets of live training sessions (face-to-face, Webinar, video conferencing) annually. Training will address specific processes that are identified by MDE as training needs for districts (e.g., packaging of materials, on-line session set ups, etc.). Repeated offerings of a given training set are not considered separate sessions. A recording will be available with the same information.
1.4.5	The vendor will use e-learning technology for training to allow flexibility access to districts. The vendor will create interactive, multi-media modules in commercially available software. All materials will be posted to the vendor website and will be available to MDE for posting on its website. Trainings hosted by the vendor are accessible to school district staff. All recorded materials, including video clips, will be accompanied by a transcription or closed captioning, as required by MDE. The trainings are managed through a learning management system (LMS) that is able to track who took the training as well as other variables such as time spent in training, performance on quizzes, administer surveys to participants, etc. Information collected by the LMS must be accessible to MDE and districts to track participation; districts can only access information related to their own staff. The software will allow for printing of certificates and resources for training. The software will be easily edited to adjust to changes without recreating. Training will be reviewed periodically, minimally annually and updated as necessary. Estimate 20 trainings will be created and maintained. - Estimate one-fourth of trainings will require video clips which are recorded and processed by the vendor. Videotaping will be conducted with Minnesota educators and students and may require travel to different district locations within the state. Assume five trips for videotaping at two days each. - For MTAS, videos of test administrations will be planned to ensure that the range of eligible students are represented (i.e., disability category, level of severity, communication mode, need for assistive technology, gender, ethnicity) in the trainings. A pool of 25-30 viable videos will be created and maintained so training sets of video clips can be randomly selected and rotated on an annual basis for use in training test administrators and field auditors. The vendor will provide source files to MDE of all trainings created.
1.4.6	The vendor will provide computers for workshops, training, advisory panels, etc as needed for short-term use. The vendor will provide up to 100 computers needed for a meeting up to three times a year. Additionally, computers shall be available for all participants at Science meetings, and approximately 6-7 for each other grade/subject advisory group meeting.
1.4.7	Workshops/Conferences
1.4.7.1	The vendor's staff will be present for workshops, conferences and district meetings as requested by MDE.
1.4.7.2	Annually the vendor will develop workshop materials and have an active role in workshop presentations including arranging and paying for facilities and food expenses. The workshops could be in at least 6 regional sites, plus 3 hosted in the metro area. Up to 600 total participants are anticipated. Additional training on computer-delivered test for technical coordinators will take place in at least 4 regional sites, plus the metro and be available via Webinar. Up to 250 participants are anticipated. Vendor will use Cvent or similar meeting invitation software for registration. Vendor will provide

Task ID	Work Task
	materials at the training sites.
1.4.7.3	The vendor will participate in MDE's Assessment conference held in August of each year. For August 2012, 2013, 2014 and 2015, this involvement includes contracting with an agreed-upon meeting organizer, presentations or interactive labs, set-up support, and other agreed-upon tasks that contribute to the success of this conference. Detail can be found in the 2009 MDE Annual Assessment Conference Scope of Work and the 2009 MDE Annual Assessment Conference Program.
1.5	**Final Administration Report**
1.5.1	At the conclusion of each operational assessment or stand-alone field test cycle, the vendor will produce a professionally written Final Administration Report in the format agreed by MDE. The Final Administration Report must be written or reviewed by staff familiar with the project. Included in the Final Administration Report will be: • a brief description of each phase of the project • a summary of online test engine performance and any administration issues • tables listing the number of items developed, items field tested, materials ordered, materials scanned, accommodated materials, reports produced, etc. • all development documentation related to schedules, questions, suggestions, issues, and resolutions verbatim, specific written comments and suggestion from each of the groups, organized by topic • the various types of problems districts and/or the vendor encountered during the shipping/receiving process
1.5.2	The Final Administration Report will be due by the vendor no later than 40 days from the time of delivery of reports to the districts or in the case of standalone field tests that do not report 40 days from the end of the test administration.
1.5.3	The vendor will use the Final Administration Report to inform debrief and/or kick off meetings.

2. Test Design

Task ID	Work Task
2.1	**Test Design General**
2.1.1	The vendor will follow Test Specifications so the correct operational assessments are developed.
2.1.2	As a cost option, the vendor will be responsible for arrangement of and the costs for test specification committee meetings to write test specifications based on revised academic standards.
2.1.3	The vendor will propose a test design, in consultation with MDE, for all high school math assessment (general education and alternate assessment) to be operational 2014.
2.1.4	RESERVE
2.1.5	As a cost option, the vendor will appropriately involve consultants at an FTE level appropriate to the task and approved by MDE to design an assessment that will meet federal review policies if there is a change in Standards, law, or other circumstance requiring us to redesign our MN assessments (e.g., alternate assessment, usability, accessibility).
2.1.6	The vendor will document and adhere to a plan for version control across the phases of all test development.
2.2	**Test Design MCA-II and III Mathematics Grades 3 ± 8 and 11**
2.2.1	The vendor will maintain the established horizontal linking design for the Mathematics MCA-III in grades 3-8 to support year-to-year form comparability and measure AYP, under constraint of item release.
2.2.2	The vendor will maintain the established horizontal linking design for the Mathematics MCA-II in grade 11 (based on 2003 Academic Standards) to support year-to-year form comparability and measure AYP, under constraint of item release.
2.2.3	The vendor will design a linking plan to support the transition from Mathematics MCA-II to the new high school mathematics assessment in 2014.
2.2.4	In 2014 and beyond, the vendor will implement and maintain a horizontal linking design for the new high school mathematics assessment to support year-to-year form comparability and measure AYP for NCLB accurately, under constraint of item release.
2.2.5	The vendor will maintain a vertical scale with appropriate technical support and quality to measure individual student growth in mathematics and report across multiple years.
2.2.6	The vendor will administer and implement the MCA-III Mathematics using an adaptive algorithm beginning early in academic year 2011- 2012 (anticipated for November 2011).
2.3	**Test Design MCA-II and III Reading Grades 3 ± 8 and 10**
2.3.1	The vendor will maintain the established horizontal linking design for the Reading MCA-II based on the 2003 Academic Standards to support year-to-year form comparability and measure AYP for NCLB accurately, under constraint of item release.
2.3.2	The vendor will design a linking plan to support the transition from the MCA-II to the MCA-IIII in 2013.
2.3.3	In 2013 and beyond, the vendor will implement and maintain a horizontal linking design for the MCA-III to support year-to-year form comparability and measure AYP, under constraint of item release.
2.3. 4	The vendor will maintain the established vertical scale for the Reading MCA-II based on the 2003 Academic Standards in grades 3 through 8 to measure individual student growth in reading and to report across multiple years.
2.3.5	In 2013 and beyond, the vendor will implement and maintain a vertical scale to measure individual student growth in reading and report across

Task ID	Work Task
	multiple years.
2.3.6	The vendor will implement the field test and operational adaptive algorithms approved by MDE. Field test items will go through data review.
2.3.7	The MDE expects the vendor to report Lexiles based on contracted research with MetaMetrics after the 2011 administration of the MCA-II for Reading and after the inaugural 2013 administration of the MCA-III for Reading. The vendor will interact with such a third-party to maintain this link and subsequently report these results. MDE and vendor received a quote of an "annual cost for MetaMetrics services is $.48 per student within the tested cohort." Vendor's contact includes reporting Lexiles for 420,000 students (60,000 students in each of Grades 3-8 and 10).
2.4	**Test Design MCA-III Science Grades 5, 8 and High School**
2.4.1	The vendor will maintain the established horizontal linking design for the Science MCA-II to support year-to-year form comparability and measure AYP, under constraint of item release.
2.4.2	In 2012, the vendor will design a linking plan to support transition from Science MCA-II to MCA-III. MDE may consider an online adaptive science test (if the field test item pool is increased as the vendor has proposed). If MDE chooses the adaptive option, the horizontal linking plan will be similar to the plan proposed for reading.
2.4.3	In 2012 and beyond, the vendor will implement and maintain a horizontal linking design for the Science MCA-III to support year-to-year form comparability and measure AYP, under constraint of item release.
2.4.4	The vendor will develop two forms for high school starting with the Science MCA-IIIs.
2.5	**Test Design MCA-Modified in Mathematics Grades 5 ± 8 and 11**
2.5.1	Each year there will be one Mathematics MCA-Modified form for each grade. Grades 5 ± 8 online forms will be appropriately resequenced to create multiple forms for security reason.
2.5.2	The Mathematics MCA-Modified will have two field test forms per grade. MDE may decide to move the modified assessments to an adaptive framework that utilizes items from both the modified and MCA banks, and adopts a common underlying scale to allow educators to monitor when students are ready to shift to the MCA.
2.5.3	The vendor will maintain the established horizontal linking design for the Mathematics MCA-III Modified in grades 5-8 to support year-to- year form comparability and measure AYP, under constraint of item release.
2.5.4	The vendor will maintain the established horizontal linking design for the Mathematics MCA-Modified in grade 11 (based on 2003 Academic Standards) to support year-to-year form comparability and measure AYP, under constraint of item release.
2.5.5	The vendor will design a linking plan to support transition from Mathematics MCA-Modified to the new alternate assessment based on modified achievement standards in grade 11 in 2014.
2.5.6	In 2014 (and beyond), the vendor will implement and maintain a horizontal linking design for the new alternate assessment based on modified achievement standards in grade 11 to support year-to-year form comparability and measure AYP, under constraint of item release.
2.6	**Test Design MCA-Modified Reading Grades 5 ± 8 and 10.**
2.6.1	The vendor will create two equated static MCA-Modified forms for each grade. MDE may decide to move the modified assessments to an adaptive framework that utilizes items from both the modified and MCA banks, and adopts a common underlying scale to allow educators to monitor when students are ready to shift to the MCA.

Task ID	Work Task
2.6.2	The vendor will maintain the established horizontal linking design for the Reading MCA-II Modified to support year-to-year form comparability and measure AYP under constraint of item release.
2.6.3	The vendor will design a linking plan to support transition from MCA-II Modified to MCA-III Modified in 2013.
2.6.4	In 2013 and beyond, the vendor will implement and maintain a horizontal linking design for the MCA-III Modified to support year-to-year form comparability and measure AYP, under constraint of item release
2.6.5	The vendor will establish and implement, as technically appropriate, a vertical scale with appropriate technical support and quality to measure individual student growth in reading and report across multiple years.
2.7	**Test Design MTAS in Mathematics Grades 3 ± 8 and 11**
2.7.1	The vendor will maintain the established horizontal linking design for the Mathematics MTAS-III in grades 3-8 to support year-to-year form comparability and measure AYP under constraint of item release.
2.7.2	The vendor will maintain the established horizontal linking design for the Mathematics MTAS in grade 11 (based on 2003 Academic Standards) to support year-to-year form comparability and measure AYP under constraint of item release.
2.7.3	The vendor will design a linking plan to support transition from Mathematics MTAS to the new alternate assessment (1% test) in grade 11 in 2014.
2.7.4	In 2014 and beyond, the vendor will implement and maintain a horizontal linking design for the new alternate assessment (1% test) in grade 11 to support year-to-year form comparability and measure AYP under constraint of item release.
2.7.5	If MN adopts Common Core Standards in Math during this contract, MN may elect to join a consortium to develop an alternate assessment based on alternate achievement standards and would modify this contract if vendor support is needed.
2.7.6	There will be a minimum of two equated static test forms containing unique items for each grade. With limited ability to field test new tasks, it will take 3-4 years to build a sufficient pool from which to construct static forms.
2.8	**Test Design MTAS Reading Grades 3 ± 8 and 10**
2.8.1	The vendor will maintain the established horizontal linking design for the MTAS based on 2003 Academic Standards to support year-to- year form comparability and measure AYP under constraint of item release. As a cost option, MDE may direct the vendor to develop and implement a vertical scale to facilitate measuring and reporting student growth over time.
2.8.2	The vendor will design a linking plan to support transition from MTAS to MTAS-III in 2013.
2.8.3	In 2013 and beyond, the vendor will implement and maintain a horizontal linking design for the MTAS-III to support year-to-year form comparability and measure AYP under constraint of item release
2.8.4	Two static operational forms will be maintained by the vendor until first operational MTAS-III administration in 2013; embedded field test items in 2011 and 2012 will be based on new ELA/reading standards and may reflect a new test design.
2.8.5	Two equated static test forms containing unique items for each grade will be developed by the vendor for MTAS-III. With limited ability to field test new tasks, it will take 3-4 years to build a sufficient pool from which to construct static forms.
2.9	**Test Design MTAS in Science Grades 5, 8 and High School**
2.9.1	The vendor will maintain the established horizontal linking design for the Science MTAS based on 2003 Academic Standards to support year-to-year form comparability and measure AYP under constraint of item release.

Task ID	Work Task
2.9.2	The vendor will design linking plan to support transition from Science MTAS to MTAS-III in 2012.
2.9.3	In 2012 and beyond, the vendor will implement and maintain a horizontal linking design to support year-to-year form comparability of the Science MTAS-III, under constraint of item release.
2.9.4	There will be a minimum of two equated static test forms containing unique items for each grade. With limited ability to field test new tasks, it will take 3-4 years to build a sufficient pool from which to construct static forms.
2.10	**Test Design GRAD Mathematics, Reading, & Writing**
2.10.1	The vendor will follow Test Specifications approved by the Commissioner of Education in August 2005, dated August 11, 2005 (clarified 2009) so the correct operational assessments are developed.
2.10.2	MDE will select a prompt and make-up prompts from the available prompts for the GRAD Test of Written Composition for the census spring administration and winter and summer retests. When writing is administered online the prompts will be selected through an algorithm that delivers them in a random fashion, tracking which prompt has been administered to individual students.
2.10.3	RESERVED
2.11	MCA-III Reading Independent Field Test
2.11.1	The vendor will administer the online MCA-III Reading Field Test during the 2011-12 school year. The vendor shall propose, and MDE shall approve, the field test plan.
2.12	High School Mathematics MCA-III Field Test
2.12.1	The vendor will administer High School Mathematics MCA-III Field Test to field test high school technology-enhanced items and increase the high school item pool.
2.13	High School Writing Assessment Aligned to 2010 Academic Standards
2.13.1	Beginning spring 2013, the vendor will administer the new, online High School Writing assessment aligned to 2010 Academic Standards which will be continuously available statewide. MDE and the vendor may mutually agree to deliver the online High School Writing beginning in Fall 2012 for GRAD retests.
2.13.2	On the schedule approved by MDE, field test prompts will be administered to students in a manner approved by MDE. The test delivery engine will monitor the number of administrations per prompt and refresh with new field test prompts, as available.
2.13.3	After a prompt has a sufficient number of responses, the automated scoring engine will be trained for that prompt and the prompt will be ready for operational use. The vendor will reserve a sample of prompt responses for an independent validation of the resulting machine rubric.

3. Item Development

Task ID	Work Task
3.1	**Review of the Academic Standards, Test Specifications and Item Pool**
3.1.1	The vendor's content teams will meet with MDE content at the beginning of each development cycle to review and discuss objectives; review test specifications; articulate development needs; discuss development strategies and timelines and identify ways for eliminating potential problems. Content team staff will acquire the requisite understanding and be prepared to demonstrate this understanding to MDE. Vendor will be responsible

Task ID	Work Task
	for meeting arrangements and the costs. MDE prefers for these meetings to be face-to-face and may be scheduled in conjunction with other meetings when possible.
3.1.2	The vendor will establish and then maintain consistency and coherence among item quality, cognitive levels, item format, test structure, and other aspects of the assessment programs to ensure the reliability and validity of the assessments. This consistency will be important in measuring growth, reporting adequate yearly progress, and providing useful information to students, parents, teachers, schools, districts, and the state as to how well Minnesota is educating its children with respect to the expectations set forth in the Minnesota Academic Standards.
3.1.3	The vendor will be responsible for the transition of recoding/updating of items when they are prepared for use with the next version of the test (e.g., MCA-III). Vendor will recode these items according to the new test specifications for each content area within three months of the initial draft being available. Vendor may need to temporarily increase staff to meet this timeline. Vendor will establish a workflow process in which vendor does recoding and content limit verification to new test specifications and the current version of the Guidelines to Test Construction and MDE verifies electronically.
3.1.4	The vendor will have new test Specifications reviewed by national Braille experts and inform MDE how to address problematic standards for Brailing in item development.
3.2	**Item Inventory, Item Banking, and Content Management**
3.2.1	The vendor will store and manage MDE items in the vendor's electronic item management system which allows MDE real-time access to all current versions of the items and all online review/viewing process, queries, sorting, and associated reporting tools.
3.2.2	The vendor's electronic item management system will be a dynamic tool that allows MDE to search for, filter, sort, preview, and print questions, as well as explore the details of any individual question and view response data. MDE's review/viewing, queries, sorting, etc., will not impede the vendor's workflow. The vendor will help MDE create individualized lists of filters, sorts, and searches to be conducted in electronic item management system.
3.2.3	The vendor's electronic item management system will allow MDE to search on any data element associated with an item (e.g., find questions according to assessment type, item type, subject, grade, and year). MDE will be able to further refine the search by benchmark, cognitive level, and difficulty. This system will be able to perform multiple filter searches. The vendor will place the ability to search by item statistics on its development schedule for 2011/2012 for expected implementation by March 2012.
3.2.4	MDE will provide the vendor a list of all properties to be included with each item. (e.g., Item ID, benchmark, distracter rationales that remain with item for life of item, cognitive levels, key, passage ID, vision concerns, etc.) The electronic item management system will contain item attributes, item data, item images, and stimulus objects, such as swf files, graphics, animations, audio files, simulations, etc., as determined by MDE. These properties and any combinations will be searchable.
3.2.5	Items, all item information, and all item assets will be maintained by the vendor so that the most current version of items is accessible by MDE within one month of requested edits
3.2.6	Flash/HTML5 or other MDE-approved code for all programmed assets associated with item content belongs to MDE and will be provided by September 1 of each year by the vendor to MDE in a format editable by other parties. All existing item delivery code, scoring engines, and other existing intellectual property, as well as enhancements to existing intellectual property, will remain the property of the vendor. All item content,

Task ID	Work Task
	including electronic representations of items, stimuli, simulations, and scenarios, will belong to MDE and be delivered annually by September 1 of each year.
3.2.7	MDE will have secure internet access to the electronic item management system as agreed upon by the MDE and the vendor.
3.2.8	The vendor will use the appropriate formatting features from the Guidelines for Test Construction. Output from the item management system will be consistent with the MDE's formatting requirements.
3.2.9	Source documentation, copyright permissions information, and related documentation will travel with the science scenarios, reading passages, graphics and all items if applicable.
3.2.10	The vendor's electronic item management system will provide an audit trail/record showing who has accessed the system and what changes that person performed at the item level. This is organized by item.
3.2.11	The vendor will load item parameters and all other item data into the item management system, and QA the accuracy of input and output.
3.2.12	The vendor's item management system will allow MDE to construct customized item cards with the most current item information and assets. Vendor may design templates for commonly used reports and item cards. These customized item cards will be printable.
3.2.13	The vendor's electronic item management system will allow batch manipulation of items (e.g., printing, downloading, etc.)
3.2.14	The vendor's electronic item management system will articulate with other technical processes such as publications/production software to increase quality and efficiency.
3.2.15	Test Maps will be generated directly from the vendor's item management system.
3.2.16	MDE will have access to the items and their assets at all times within the vendor's item management system. Annually (September 1), upon request, and when required for transition to a new contactor, the vendor will provide MDE with all items and all their assets in XML according to Accessible Portable Item Protocol (APIP) standards.

Annually, MDE and the vendor will review the APIP standards and determine implementation of applicable standards. If APIP calls for changes to other than the format of the XML export in this task, MDE and the vendor will identify associated increases in contractor tasks and prices, if any, required to implement any APIP standards desired by MDE. For example, if the APIP standards allow for field(s) to support sign language content, the actual creation of sign language content is not included in this SOW unless modified. |
3.2.17	The vendor will provide annual professional development workshops by September 1 each year for MDE staff to learn how to use the system and allied software.
3.2.18	The vendor's staff will make preliminary selections of operational items for administration using data stored in the electronic item management system.
3.2.19	Once the vendor integrates its item management system and test construction tools, the vendor will utilize its electronic item management system in the development of the tests so all test construction capabilities will be available through a browser interface to allow for real-time item exchanges during test construction.
3.2.20	The vendor will load all legacy items and their assets into their management system at the start of the contract, quality checking that the integrity of the items, their associated metadata, art and item statistics is maintained. Vendor will provide reports of quality checks to MDE. This shall be

Task ID	Work Task
	accomplished on an agreed upon schedule between MDE and the vendor not to exceed three months from the receipt of complete item deliveries per subject and per test from MDE.
3.2.21	RESERVED
3.3	**Item Development All Assessments**
3.3.1	All item development by the vendor will follow the most current version of the Guidelines for Test Construction and Test Specifications. Significant changes to these Guidelines and Specifications from the version available at contract signature that require additional or rework by the vendor will increase contract prices.
3.3.2	The vendor's copyeditors and publication staff will be well versed in the requirements specified in the Guidelines for Test Construction.
3.3.3	All item development will follow and be tagged according to Accessible Portable Item Protocol (APIP) standards once established. Tagging for new accommodations will result in an increase in vendor prices.
3.3.4	If unable to meet quality expectations of the MDE, the vendor will be responsible for costs associated with additional onsite training of their staff in the Guidelines for Test Construction as delivered by MDE. This may be required up to once per year.
3.3.5	An Annual Item Report for applicable tests for each content area and grade will be provided to MDE by the vendor by dates established in each assessment's development schedule. This report will be reviewed and updated at least once a year. The Annual Item Report contains the Pool Evaluation and a Recommended Item Development Plan.
3.3.6	The Pool Evaluation is a content review reporting on the quality and coverage of the content area's existing item bank.
3.3.7	The Recommended Item Development Plan is informed by the pool evaluation and provides a recommended annual item development order to address identified gaps for the respective test, content area, and grade.
3.3.8	The vendor content specialists will attend a meeting in Minnesota to present the Annual Item Report to discuss item development, item alignment, item pool, and design philosophies prior to beginning item development efforts. These meetings will occur as needed, no more frequently than once per development cycle.
3.3.9	All item development will follow the FINAL Item Development Order approved and placed by MDE on an annual basis. The vendor's prices are based on Attachment 11.7 of the RFP (Item Development Plan).
3.3.10	The vendor will develop all passages, scenarios, simulations and items specifically for Minnesota, and these shall remain the property of the state of Minnesota. Passages, scenarios, simulations and items should not be previously used or rejected from another test.
3.3.11	The vendor will require all item writers to sign a confidentiality agreement. These documents shall be kept on file with the vendor for the term of the contract.
3.3.12	The vendor will hire qualified test item and passage writers. The vendor will use criteria in Guidelines to Test Construction (most recent version). Science storyboards and items are written by Minnesota educators. Storyboard and Item writers who wrote items for Minnesota are not allowed to serve on MDE Advisory Panels.
3.3.13	The vendor's content specialists will develop, with MDE content input, an item writer's manual that will include content-specific training materials. This manual shall be submitted to MDE Content for review at least one month prior to distribution and training.
3.3.14	The vendor's content specialists will train content area passage and item writers by providing specific training on the Minnesota Academic Standards,

13

Task ID	Work Task
	test specifications, and achievement level descriptors. The vendor will include MDE staff in training, preparation and presentation. The vendor may train passage and item writers in session covering vendor's standards for passage and item development to focus on state curriculum standards and for different item types. The MN-specific training for writers may include face-to- face sessions and self-study and conference calls for previously experienced writers. Training will be scheduled at least 30 days in advance so MDE can make travel arrangements if desired.
3.3.15	For subjects other than science, at least 4 item writers will be assigned by the vendor to a grade level. Item writers may be assigned to more than one grade but no more than two grades, (e.g., an item writer may write for both grade 3 and grade 4 math).
3.3.16	Science item writers will be assigned by the vendor only to one grade and should have teaching experience in the grade band (e.g., grade 5 item writers will have experience in grades 3, 4 or 5).
3.3.17	Passage and item writers will be assigned by the vendor a specific item-writing task only after they have completed and passed the training and qualifying.
3.3.18	Items may also be developed by current Minnesota educators in an Item Writer Workshop. The vendor will be responsible for attending this workshop and costs associated with meetings and independent item development efforts of these educators. MDE will approve the educators participating in the Item Writer Workshop and will collaborate in the development of the workshop content.
3.3.19	The vendor will provide all items with a written rationale for each of the distracters in a format determined by MDE.
3.3.20	The vendor will develop items that are clear and appropriate for the target populations. The concept of Universal Design and linguistic simplification will guide inclusion as described in the Guidelines for Test Construction.
3.3.21	The vendor's content specialists will review all items to make certain that the stimulus materials satisfy all specifications and are free from bias or stereotyping.
3.3.22	The vendor will have all passages reviewed by a recognized, qualified and authoritative vision specialist group separate from the vendor (e.g., American Publishing House for the Blind) prior to submission for New Item Review. All items shall be reviewed by a qualified and authoritative vision specialist group separate from the vendor following New Item Review. Vendor content provides to MDE a list of recommendations informed by the vision specialist group that can be considered for implementation.
3.3.23	All items shall be reviewed by a recognized, qualified and authoritative deaf/hard of hearing specialist group separate from the vendor following New Item Review. Vendor content provides to MDE a list of recommendations informed by the deaf/hard of hearing specialist group that can be considered for implementation. The vendor may recommend alternative processes to ensuring items are appropriate for D/HH students.
3.3.24	The vendor's content specialists will review the items for grade-level appropriate cognitive complexity prior to New Item Review.
3.3.25	The vendor will provide biannual training in 2011-12 and 2013-14 in Minnesota on Depth of Knowledge to be attended by the vendor and MDE Content staff. Minnesota prefers this training be offered by Norm Webb or associates.
3.3.26	The vendor's content specialists and copyeditor will review the items for format/style, grammar, spelling, punctuation, and grade-level appropriateness of vocabulary and structure according to the Guidelines for Test Construction prior to New Item Review and while preparing for publication.
3.3.27	The vendor will conduct extensive internal bias and sensitivity reviews of the items. Only after all items have passed the internal reviews for content validity and fairness will the items be presented for external Advisory Panel review.

Task ID	Work Task
3.3.28	Before submission to MDE, after MDE pre-review, and after Committee Review, the vendor will have two grade level content experts and editorial staff review the items and make the required revisions.
3.3.29	A team of vendor content specialists who were not involved with the initial development of the items will review all newly-developed items and suggest edits to internal vendor content team prior to Advisory Panel meetings.
3.3.30	In the first year of the development cycle, the vendor will send at least 20 items per grade per subject in a genre and benchmark distribution determined by MDE to MDE for quality review. MDE will review in a timely manner. If items do not meet MDE requirements, the vendor will meet face-to-face with MDE in Roseville, MN to revisit MDE requirements. MDE will provide specific and comprehensive feedback on the items. This option may be extended in future years at the discretion of MDE.
3.3.31	The vendor's content specialists will revise items from the preceding scope line and will submit items to MDE for final approval within 8 business days of receiving feedback from MDE.
3.3.32	Prior to new item review, MDE, the vendor and sub-contractor (if applicable) and content specialists will meet to review and discuss all items. This will be done such that edits can be incorporated in time for new item review. Vendor will be responsible for arrangement of and cost for these pre-review meetings.
3.3.33	When approving final edits to simulations, scenarios, and the like where TTS is not applicable, MDE will review audio files for accuracy and quality and vendor will re-record if necessary.
3.3.34	All constructed-response items will include a sample answer for each score point as described in the Guidelines for Test Construction.
3.3.35	All constructed response (CR) rubrics are reviewed and revised by a table leader named in the proposal (one per content) from the vendor's scoring center prior to the items being presented to MDE and New Items Review panels. This review will be done in the process such that table leader's edits and concerns can be incorporated and addressed prior to being presented to MDE and panels.
3.3.36	All CR rubrics are written by the vendor using the MDE format that identifies score point descriptions, designators, and sample student responses for each score point.
3.3.37	For MDE Final Content Review, MDE and the vendor will agree on a schedule that, to the greatest extent possible, allows for a minimum of 10 days per grade (without other tasks on the schedule being double booked). For high school, time frame should be treated as 2 grades.
3.3.38	At the conclusion of the development cycle for each test, the vendor and MDE will participate in a debrief meeting preferably on site in Roseville, MN.
3.4	**Passage Development & Asset Permissions**
3.4.1	Passage procurement will be conducted in a manner that will result in rich passages with content enabling the development of high quality items. Passage sources are diverse and of high quality. Passages will represent the ethnic diversity of the population of Minnesota.
3.4.2	Passage quality will support robust item development per passage.
3.4.3	Passages chosen by the vendor for each grade level will be coded for genre, readability, word length, and ethnicity and will be reviewed for content, quality, and bias.
3.4.4	Permissioned passages will be procured by the vendor on behalf of MDE.
3.4.5	Permissions to use the passage or excerpts of passages from the publisher and/or author will be acquired by the vendor for both paper- based and electronic publication before the material is used on any test forms. Electronic permission will be required to allow for use of released items on a non-

Task ID	Work Task
	secure (publicly accessible) web site, and this permission must be gathered at the time of release. Permission will be required to cover the life of the contract obligation between MDE and vendor. The vendor will be named on the permission contract as licensee on MDE's behalf. The vendor will provide a sample of how permissions will appear on the Acknowledgement Page as outlined in the Guidelines for Test Construction document.
3.4.6	Where appropriate and with necessary permissions, screens or data tables will be used from copyrighted sources. The vendor will acknowledge these appropriately on the computer-delivered testing system.
3.4.7	The vendor will confirm all legacy passages that will carry over have permissions. Total number will be determined as contract proceeds and the number of legacy passages required by grade can be determined based on content needs.
3.4.8	Permissions obtained by the vendor are required for released passages.
3.4.9	Vendor will acquire permissions sufficiently prior to on-site test construction to allow for field testing, operational usage, and possible release as a sampler item.
3.4.10	Items based on copyrighted materials will not be included in the final number of items submitted to the MDE by the vendor if the copyright owner cannot be located or if the copyright owner will not grant permission.
3.4.11	Vendor will be responsible for the cost of the individual copyright permission and any associated costs in obtaining it.
3.5	**Item Development Science Grades 5, 8 and High School**
3.5.1	The vendor and MDE will collaborate to train Minnesota educators to develop and write storyboards. The vendor will provide storyboard Writing templates, training materials and resources, aligned to Minnesota's Academic Standards in science, for initiating development of the storyboards.
3.5.2	Storyboards developed by the vendor will include the proposed placement of items along with the benchmark to be addressed, scripts seen on screen by students, description of media or stimuli for development, any necessary characters and content references.
3.5.3	The vendor will field test each scenario with two different sets of approved items.
3.5.4	MDE will review Science MCA-III storyboards at the following points 1) writing templates, 2) updated storyboards from writing panel meeting, 3) storyboard selection for storyboard review panel meeting, 4) edited storyboards from storyboard review panel meeting, and 5) storyboard selection for item development purposes.
3.5.5	For Science MCA-III, vendor will develop and update as necessary a cast of age-appropriate male and female characters representing a range of ethnicities to appear in animations and graphics where human figures are required.
3.6	**Item Development GRAD Mathematics, Reading, and Writing**
3.6.1	At this time, MDE does not anticipate further item development unless legislation requires administrative changes.
3.6.2	RESERVED
3.7	**Item Development MTAS Mathematics, Reading and Science**
3.7.1	The vendor will write the number of MTAS-III reading tasks and passages identified in the Item Development Plan referenced in 3.3.9 to build a pool of reading passages and items. The balance of fiction and nonfiction passage development for reading should be based on balance identified in the test specifications.
3.7.2	The vendor will write the number of tasks identified in the Item Development Plan referenced in 3.3.9. for MTAS-III math and science.

Task ID	Work Task
3.7.3	The vendor will write MTAS task administration scripts following the current design templates.
3.7.4	The vendor will illustrate the MTAS reading passages following the current picture book and Symbolic Content templates.
3.7.5	The vendor will design MTAS presentation pages in picture book format to visually represent the tasks scripted at score points 3 and 2-0. For reading, presentation pages are developed in two formats: picture book and symbolic format.
3.7.6	The vendor will design MTAS response option cards to visually represent each task's response options. Each math and science task has one set of response option cards. For reading, two sets of response option cards are developed: one in picture book format and one in symbolic format.
3.7.7	The vendor will develop the number of items identified in the Item Development Plan referenced in 3.3.9.
3.8	**Item Development MCA-Modified Mathematics and Reading**
3.8.1	The vendor will commission reading passages for the MCA-Modified.
3.8.2	The pool of MCA-Modified item/passages presented at item and passage review for each grade/subject combination will be in accordance with the Item Development Plan referenced in 3.3.9 and the item development plan presented by the vendor to and approved by MDE at the beginning of the development cycle.
3.9	**Advisory Panel Meetings**
3.9.1	The vendor will follow all requirements provided in the Vendors Guide to Advisory Panels (VGAP).
3.9.2	The vendor will enter into a contract with CVENT (or similar planning meeting software) and provide access to MDE at no additional charge. Programs other than CVENT must allow for the loading of existing panelist information, which shall be provided by MDE.
3.9.3	The vendor will register and invite panelists through CVENT online program or comparable online system. Online invitation program will allow for hotel registration, meal requirements, and assorted attachments required prior to the meeting. Vetting invitee lists will be done by MDE staff after the vendor seeds the panel in the software program. Online system will allow for tracking of attendance of panelists' history by panel.
3.9.4	Vendor will maintain a current and accurate master calendar of all advisory panels and related internal meetings. This master calendar will be kept current and on a collaborative Share Point (or equivalent) site for access by all parties.
3.9.5	The vendor will append Advisory Panel meetings for MCA-Modified to existing MCA meetings when possible or as necessary. Panelists for MCA-Modified meetings will consist of one half general educators and one half special educators.
3.9.6	For special purposes beyond those identified in the VGAP, the vendor will convene up to 3 panels with 15 members over 3 days per year of Minnesota educators. The vendor will be responsible for inviting panelists through CVENT or comparable software and covering all expenses related to the meeting including reimbursement of substitute pay, honoraria, food, mileage, lodging, and meeting room expenses.
3.9.7	The vendor will be responsible for all expenses related to the review meetings including reimbursement of substitute pay, honoraria, food, mileage, lodging, and meeting room expenses.
3.9.8	Appropriate vendor staff will serve as the lead facilitator at the meetings. If there is a sub-contractor, a person for that company for each content area and grade level will also attend.
3.9.9	The vendor's psychometric staff will attend in-person all data review meetings and provide training on statistical analysis for each subject and grade level in Minnesota. The vendor will provide facilitators for each grade and subject that understands the content under review.
3.9.10	For subject areas with items requiring performance scoring, vendor test development specialists will review and discuss anchor papers/sets and scorer

Task ID	Work Task
	comments with the vendor's performance scoring staff after rangefinding or rubric validation. The vendor content staff will then arrange conference calls between MDE, performance scoring and content specialists to discuss any lessons learned that may be useful for the next round of item development.
3.9.11	A named vendor lead performance scoring director for each content area and grade level will attend New Item Review when constructed-response items are addressed.
3.9.12	The vendor will work with MDE to develop a training program for the content review Advisory Panel to include rationale for content, how items were written, roles and responsibilities of Advisory Panel members and procedures to be followed for the meeting.
3.9.13	The vendor staff will prepare a set of materials (e.g., agenda, handouts, item-review forms) for use in the Advisory Panel sessions available for MDE review one week before sessions.
3.9.14	All changes may be captured electronically and in writing. During or at the end of a panel, the vendor will make the approved MDE edits to all the items in its electronic item management system. All committee edits will be reflected accurately during the next phase of development when MDE reviews.
3.9.15	The vendor will provide high-quality items and therefore will ensure MDE item review panels will extensively edit less than 10% of the items. An extensively edited item is defined as an individual item that requires rewrite of the stem, rewrite of the distracters, and rewrite of the context
3.9.16	For online tests, the vendor will provide an electronic version of all final test items and images incorporating any changes made as a result of suggestions and comments from electronic review panels.
3.9.17	For computer-delivered, scenario-based tests, Advisory Panel members will review the storyboards/scenarios and then the items. The vendor and MDE will determine when the video format or electronic review will be reviewed and what that review will look like. At each step, reviewers' comments will be incorporated (pending MDE approval).

4. Test Construction

Task ID	Work Task
4.1	Test Construction for all Assessments with Development
4.1.1	Consistent with 3.1.1., the vendor will follow MDE's Test Construction Process and the current version of the Guidelines for Test Construction.
4.1.2	Annual operational forms constructed by the vendor will be statistically equivalent from year to year.
4.1.3	The vendor will construct all operational forms to match the target test response functions.
4.1.4	The vendor should allow a minimum of 3 days for review of each initial operational selection in the schedule (without other tasks on the schedule being double booked).
4.1.5	Operational items will be reviewed for technical adequacy (fit psychometric targets) by the vendor's psychometric team and MDE's psychometric team prior to publication. The vendor and MDE will determine format in which this psychometric information is provided.
4.1.6	Test maps in the format and naming convention established by MDE will be sent by the vendor with each submission of items and forms.
4.1.7	The vendor will have psychometric and content staff knowledgeable of the Minnesota test design in attendance during on-site test

Task ID	Work Task
	construction meetings. MDE may also choose to be in attendance on-VLWH DW WKH YHQGRU¶V ORFDWLRQ GXULQJ WKH FRQILJXUDWLRQ ILOH simulations.
4.1.8	The vendor will submit psychometric guidelines for test construction of operational forms to MDE for review and approval.
4.1.9	The vendor will be responsible for arrangement of and the costs for on-site test construction meetings.
4.1.10	Pre-equating will take place simultaneously with forms development using both test characteristic curve and information function matching.
4.1.11	The vendor test development specialist will make preliminary selection of field test items for the test forms they develop.
4.1.12	MDE will review and approve all field test items selected for inclusion in a form. Items should be presented to MDE as stated in Guidelines for Test Construction.
4.1.13	MDE will review programming for correct scoring and functionality and provide approval before the test is approved to publish.
4.1.14	MDE will review science forms development at the following points 1) clip images/graphics of storyboards upon request 2) onsite review of animation and items, and 3) audio files.
4.1.15	The vendor will reimburse MDE-selected content contractors who will receive work direction from MDE and be located on site at MDE to provide independent review of test materials on an as-needed basis. These contractors are not to take the place of vendor's content specialists. Assume a total of 1,500 hours per year.
4.1.16	The vendor will reimburse at market rates MDE-approved copy editors who will receive work direction from MDE and be located on site at MDE to provide independent review of test materials on an as-needed basis. These copy editors are not to take the place of vendor's proofing. Assume a total of 3,000 hours per year. (This scope is changed from the RFP Q&A.)
4.1.17	At the conclusion of the Test Construction cycle for each test, the vendor and MDE will participate in a debrief meeting at MDE or via conference call.
4.2	**Item Samplers and Released Items**
4.2.1	Item Samplers and released items will be updated by the vendor as requested by MDE for all tests, but not more than annually. MDE anticipates having new Item Sampler for each grade every other year for the MCA in math, reading and science using 30 newly released items. For static form assessments (MCA-Modified Math, MCA-Modified Reading, MTAS Math, MTAS Science, MTAS Reading), anticipates producing two Item Samplers over the course of the contract, using approximately 15 released MCA-Modified items per sampler and 6-8 released MTAS items per sampler. MDE anticipates for GRAD to produce a new Item Sampler every third year in math and reading, using 30 newly released items (math and reading) and 2 prompts per year including scoring rubric and scored sample papers.
4.2.2	Item Samplers will follow the Guidelines for Test Construction.
4.2.3	The vendor will create online item samplers that generate a score for items that are machine scored.
4.2.4	The vendor will make available item samplers to district staff three months prior to the opening of the test window
4.2.5	The vendor will transition existing released items to the most current delivery mode (including updates to reflect online testing engine).
4.2.6	The vendor will provide item samplers for each assessment that will mirror the operational forms and accommodated forms, although they may not be complete forms.
4.2.7	The vendor will develop and prepare a Writing Handbook (Item Sampler) for the Written Composition GRAD. The Handbook will contain exemplar papers with annotations at each score point. Writing handbooks (Item Samplers) will be posted on the web. The vendor will provide a PDF of the

Task ID	Work Task
	Writing Handbook to MDE annually following the spring test administration.
4.2.8	Prior to the first MCA-III science administration in spring 2012, item samplers will be updated by the vendor to include new benchmarks and one simulation per grade from the MDE item bank.
4.2.9	Items will be released by the vendor on an annual basis as appropriate to the item pool and determined by MDE. The test and linking designs must be established in a timely manner to allow for item release at least 3 months prior to the first operational administration
4.2.10	The vendor will provide a tool for teachers to access the released items that will be searchable by content alignment and item type. This tool will allow teachers to identify released items and administer to students in a manner that replicates the administration mode and testing experience.
4.2.11	The vendor will have the most current Item Samplers produced for accommodations by assessment, grade and subject - Large Print, Scripts, full accommodated audio and Braille.
4.2.12	The vendor will deliver an item release bank allowing teachers to access specific items to build their own sample tests. MDE envisions this release tool to have similar functionality to the NAEP Questions Tool, which may include useful data for teachers (e.g., student selection of distracters).

5. Online Administrative System & Test Engine

Task ID	Work Task
5.1	Administration System
5.1.1	The vendor will provide administration systems, with one userid and password (via single signon with Minnesota upon MDE request) for each user, that integrate with MDE data sources to perform all required functions to administer and report online and paper and pencil tests. Specifically, this includes registering students, setting up online testing sessions, The vendor and MDE will establish data flows between vendor and MDE systems, including daily updates of administration information from MDE to vendor, and flows of student data from vendor to MDE on a schedule to be determined by MDE at the beginning of each testing cycle. The vendor also will support the immediate registration of students not provided in the MDE data flows, and work with MDE to establish and implement business rules to reconcile/update MDE systems. MDE will add required data elements to support online and paper administration to MDE systems, such as accommodations.
5.1.2	The vendor will update their system with MDE-provided organizational unit file (official roster of schools and districts) as needed via an automated data flow.
5.1.3	The vendor's system will be capable of receiving supplemental information, including overage rules, delivery date options, delivery to school or district, label options, and other information such as indicated in the current Procedures Manual for the Minnesota Assessment 2009-10.
5.1.4	To the greatest extent possible, the data flows in Section 5.1.1 and 5.1.2 will support registration and ordering testing materials including accommodated materials.
5.1.5	Outside of the data flows in 5.1.1 and 5.1.2, the vendor will also provide a system to support the immediate registration of students for testing, ordering additional materials by districts, registering non-public schools and others not resident in MDE systems, and any other services that cannot be accommodated by data flows from MDE.
5.1.6	All vendor systems accessed by MDE will allow the establishment of customized user roles, This customization is configured by the vendor, and

Task ID	Work Task
	appropriately authorized users can assign these roles to other users for whom they are responsible. The vendor will work with the MDE to ensure that a sufficiently broad and flexible set of user roles is available from which users may select.
5.1.7	The vendor's system will capture data flows from MDE on students (e.g., MARSS number, gender and birth date) to register as eligible for testing. The vendor's system will provide a workflow that makes pre-registration for specific testing sessions unnecessary. The test administrator (TA) establishes a testing session with as few as two mouse clicks, adding students to the session dynamically. Demographic information shall remain attached to the student record.
5.1.8	RESERVED
5.1.9	The vendor's system must include an 'approval of all' function to allow all students in a session to begin testing.
5.1.10	RESERVED
5.1.11	Vendor's system will track students' movement from one school to another within their district or across districts.
5.1.12	The vendors system will show online testing status immediately upon inquiry by assessment and district. This status is available to MDE and districts (for example, number of students testing by district and total tested, average time tested). Daily status reports will be available for viewing.
5.1.13	The system will allow to access summary reports that indicated student status by administration (e.g., not complete, test code indicated, etc.) The vendor's system will provide the MDE, district, and school level a report generated on demand to identify students' testing status.
5.1.14	The vendor will collect and be the source for the approved list of District Assessment Coordinators (DACs), School Assessment Coordinators and Technology Coordinators.
5.1.15	The vendor will check web enrollment orders when received from MDE systems (e.g., accommodated materials) for reasonableness. Contact with the district requesting an explanation of unusual order (using criteria mutually agreed to by MDE and vendor) will be made before materials are shipped.
5.1.16	The vendor will follow up at least twice with any public district if the requested information including supplemental information is not received by a specified cut-off date. A list of districts not responding will be provided to MDE.
5.1.17	The vendor will prepare a database from which required print quantities, packing lists, inventory forms, materials control forms, test book security ID numbers, and related forms are generated.
5.1.18	RESERVED
5.1.19	The vendor will have a resource site for manuals, software, item samplers, training materials etc. that does not require a userid or password. The vendor will also have the ability to post secure materials for approved users. The vendor will provide usability and timely maintenance of the Website. When requested, resources must be posted within 24 hours.
5.1.20	The vendor will provide a comprehensive training platform that includes "demonstration" users in a demonstration district within the live production site so that users can experience first-hand the test administration system functionality.
5.1.21	RESERVED
5.1.22	The vendor will deliver immediate, online, and printed reports as described in Task 12 below.
5.1.23	The vendor's system will collect test codes, accommodation codes and other demographic information by administration for online assessments before, during and after testing via data flows from MDE.
5.1.24	The vendor's system will allow for entry of student data and scores if required by an assessment without a separate system or test engine for

Task ID	Work Task
	collection of MTAS and Alternate Assessment Writing). For the Alternate Assessment of Writing, Teachers score the writing Students are pre-id in the MARSS system the same way as MTAS or other students The vendor will make available a data entry page during the MTAS window for AA-Writing The vendor will produce an ISR similar to the report issued in 2010. The results are not put into the online reporting system and there are no district reports. The vendor will provide a final data file.
5.2	**Online Support**
5.2.1	The vendor will provide a technology staff member to serve on the State Assessments Technology Work Group (SATWG) as needed.
5.2.2	The vendor will provide requirements and User Guide documents including screen shots that provide instructions for all users.
5.2.3	The vendor will provide customer service specific to online as outlined under Project Planning and Communication, Customer Service.
5.2.4	The vendor will create training materials for personnel in district performing the various functions required to successfully deliver online assessment. Online assessments will have manuals, user guides, available through 24/7 e-Learning modules (Refer to task 1.4.5).
5.3	**Online Assessment Design and Delivery**
5.3.1	The vendor's assessment user interface and delivery will be designed to run on Windows 2000, XP, Vista, 7; Mac OS X (10.3, 10.4, 10.5, 10.6); and Linux K12LTSP. All aspects of the system must be accessible for districts that use either Macs or PCs (running these operating systems or future versions of same). Each summer, the vendor shall issue a secure browser update to incorporate important changes and deliver it for testing the following school year. Technology requirements for the current testing year must be established four months prior to main testing window and any updates must be seamless and transparent to the district through the testing cycle.

The vendor understands that several districts in Minnesota use an NComputing platform running Windows XP. The vendor will make every reasonable effort to support it starting in Fall 2011 by adding this platform to its test lab and including it in all testing protocols. |
5.3.2	The vendor's solution must have only minimal dependence on third-party software, except for the operating system. When operating system versions are updated, the vendor shall support the update within no more than 45 days of release. Other than operating systems, the browser shall be installed with an independent deployment of Flash (which does not interfere with the version already running on the client machine). The Browser shall access only the Flash version that ships with the browser, and this version shall be immune from third-party updates. Every machine used for testing will have the appropriate version of Flash and that this version will remain stable throughout the testing window.
5.3.3	If needed for testing, the vendor will verify most recently released versions of critical third-party software will be compatible at the time of each administration of an online test. Support for previous versions of third-party software will continue until MDE approves discontinuing support.
5.3.4	Vendor's system must allow test delivery on wireless networks with comparable performance to wired networks.
5.3.5	The vendor will adhere to highest-level industry standards for delivery of online tests and security of student data.
5.3.6	Support for versions of operating systems will be continued until MDE approves discontinuing support for a particular version.
5.3.7	The vendor's test engine will be designed for installation on student machines.
5.3.8	The vendor's test engine will require minimal bandwidth per user during administration.
5.3.9	The vendor's test engine will ensure that student responses will be securely maintained and recoverable.
5.3.10	The vendor's test engine will continuously update temporary answer files so no work is lost during a service interruption, including student-saved

Task ID	Work Task
	partial responses to items such as constructed response items.
5.3.11	The vendor will provide user friendly tools for districts to test and verify the technology, hardware, and software to ensure the computer delivery method can be implemented. The tools should test the speed of Internet connection from student machine after Secure Browser is installed.
5.3.12	The vendor will send districts a notification as soon as the system is available.
5.3.13	Vendor will develop a database of administration that will monitor test and item exposure, prohibit administration of particular tests and items to individual students or student groups and track that students are not repeating a test or item in a duration specified by MDE.
5.3.14	The vendor's online writing assessment will present the prompt or material the student will respond to. The presentation may include stimulus materials, including color photographs, newspaper articles, poems, and multimedia stimuli such as short videos and audio.
5.3.15	The vendor's online writing assessment will include the opportunity for students to pre-write online through the student-save function. Students can then edit their pre-writing before submitting for final scoring. Cut and paste capabilities will be available, although it may require non-traditional keystrokes (ctrl-x, ctrl-v) as those are used for students who rely on keyboard navigation.
5.3.16	The writing online test engine will include the option for MDE to select the specific tools that will be included on a writing assessment. These tools may include, but are not limited to cut, paste, copy, bold, underline, undo, redo, spell check, print and paragraph format (indent, outdent), input special characters (operators, functions, Spanish symbols) among other basic word processing functionalities.
5.3.17	The vendor will provide an online test engine to administer an online writing assessment that can be stand alone or administered within another assessment, such as reading.
5.3.18	**Tools and Accommodations**
5.3.18.1	Vendor's test engine has tools available from which MDE will select those appropriate for each test. At a minimum the tools will include: highlighter, notepad, cross-out wrong answer, reset, customizable exhibit window (formula sheet and periodic table), calculator, audio functionality. Vendor will place ruler and compass on its development schedule for 2012/2013 and available operational no later than the end of 2013; however, specific requirements will need to be determined. Keyboard navigation and scaling will be considerations.
5.3.18.2	Vendor's test engine has navigation buttons from which MDE will select those appropriate for each test. At a minimum the navigation will include: next, back, skip to, mark for review.
5.3.18.3	The vendor will make available basic four function, scientific, and graphing calculators in the online assessment. MDE will be able to determine which calculators will be available in which subjects, tests and grade levels.
5.3.18.4	The vendor's engine will have calculator availability determined by overall test or by test segment. The vendor will work with MDE on future deployment of a system enhancement that will allow for calculator availability depending on each items' specifications.
5.3.18.5	All calculators within the vendor's test engine will function in a manner consistent with calculators commonly used in classrooms.
5.3.18.6	The vendor will have audio functions integrated in the test delivery interface. Students adjust volume before starting the secure browser.
5.3.18.7	The vendor will have a comprehensive, student-centered help function available throughout all online assessments.
5.3.18.8	The vendor's test delivery interface will include the information and resources required to make a test item accessible for the greatest possible number of students with a variety of disabilities and special needs. The currently available accommodations built into the test delivery interface

Task ID	Work Task
	include text-to-speech with ability to highlight text in items or stem on the screen to be read aloud, alternate text tags, magnification, selection of foreground and background colors, color overlay, adjustable font face (State to define at the test level), and virtual keyboards. The vendor will consult with MDE on the need for specific additional features such as delivery of sign language, captioning, masking, and voice recognition for possible insertion into the vendor's annual development schedule. - The vendor will begin research in 2011 on an indicator for what is being read by text-to-speech and voice recognition for expected implementation in 2012 and 2013. Final implementation dates will be dependent on research findings. - The ability to adjust audio volume after the test is started will be available in 2011/2012. - The vendor will place sign language and captioning on the development schedule for 2012/2013 for expected implementation in 2013. The cost of signing the items will increase contract prices and will be negotiated as a scope change. As more detailed specifications and requirements are developed, schedules may need to be adjusted.
5.3.18.9	For accommodations that cannot be built into the test administration software, the vendor's software will be compatible with third-party devices and software that allow accommodations to be offered to students with disabilities. Devices that can be used with the test delivery interface include alternate keyboard, alternate mouse, refreshable Braille displays, Braille note takers, keyboard emulators, alternative and augmentative communication devices. Refreshable Braille displays and Braille note takers will be available starting fall 2011.
5.3.18.10	The test delivery interface will test administrators to select accessibility features to be available to individual students based upon their needs.
5.4	**On-line Forms Development**
5.4.1	The Guidelines to Test Construction will be followed by the vendor and MDE.
5.4.2	The vendor will provide audio for all text on screen in science and mathematics online assessments via text-to-speech technology. The exact text-to-speech text read for an item may be altered by MDE to eliminate cuing. For science and math, the vendor will provide audio either via existing pre-recorded audio files (provided by MDE) or via text-to-speech (TTS). For existing pre-recorded audio files, the vendor will migrate all files from MDE. For TTS, the vendor will alter the text that is read by text-to-speech by tagging items per MDE- approved tagging guidelines that address all rules. These rules address, for example, reading math operators and equations, describing tables, graphs, pictures, figures, and other images, and reading text features such as dashes, ellipses, line and paragraph numbers, quotes, and Roman Numerals. MDE currently uses recorded audio for science simulations and in any place where animations are used, and the vendor recognizes that recorded audio may continue to be required and used in this instance. The vendor also must be able to deliver the science simulations with TTS to reduce bandwidth requirements. Audio and TTS may be mixed within the same test and should follow the same MDE-approved guidelines.
5.4.3	The vendor systems will allow text within a graphic or table to be read using text to speech. With TTS, students may highlight specific portions of passage or all options to be read independently. With audio, the only option is to read the entire file.
5.4.4	After the initial year, MDE will do a quality assurance review of the operational administration of the test engine four weeks prior to the system

Task ID	Work Task
	opening live or made public to school districts. During the initial year, the vendor and MDE will mutually agree on a review schedule. Any mandatory changes identified by MDE will be incorporated by the vendor before the start of administration.
5.4.5	After the initial year, final, approved forms and items will be available in the vendor test engine a minimum of two weeks prior to the opening of the test window. During the initial year, the vendor and MDE will mutually agree on a review schedule.
5.4.6	Updates to the vendor's test delivery system that will impact a district will not be made without discussion with MDE.
5.4.7	The vendor will provide MDE with Quality Control (QC) verification information for online administrations annually. The objective is to ensure that the adaptive online system is working as expected, for example, the algorithm is pulling the correct image, test specifications are met, the correct audio is with the image. The vendor and MDE will agree to what verification information is sufficient and when the results of the QC verification will be reviewed during planning for the next administration. The vendor will assist MDE in planning for independent QC verifications to be done by MDE.
5.4.8	Online standalone tutorials will be developed by the vendor. These will be used to familiarize the student with the system and the item types prior to the opening of the testing window. Tutorials will be available and accurate with the same timeline as item samplers.
5.4.9	In-test tutorials will be developed by the vendor. Tutorials will be reviewed and approved prior to MDE's scheduled review of test forms.
5.4.10	The vendor will document and adhere to a plan for version control across the phases of online test development
5.4.11	Online standalone and in-test tutorials will be updated before each testing cycle by the vendor as appropriate and requested by MDE.
5.4.12	The vendor will translate the MDE approved storyboards to interoperable, media-rich, computer-delivered formats using a stand-alone, secure, cross-platform application (the Secure Browser) that is compatible with operating systems and third-party software. Hardware, software and bandwidth specifications required to deliver this media-rich format must be sensitive to the current infrastructure of Minnesota districts.
5.4.13	The vendor will post to the data entry/test delivery online interface any portions of the MTAS Task Administration Manuals and task presentation materials that MDE requests.
5.4.14	The vendor will develop contingency plans in collaboration with MDE to address if system is inoperable during the testing window.
5.4.15	A full-length sample test made up of released items will be maintained by the vendor for districts to use as a system check of the online testing engine, if not sufficiently addressed with utilities package.
5.5	**Computer Adaptive Testing (CAT)**
5.5.1	The vendor will provide technical advice in developing a computer adaptive test in math and reading.
5.5.2	The vendor will implement an algorithm for administering CAT items that interfaces with the online engine.
5.5.3	The vendor's system has capabilities that can limit the co-occurrence of items within an identified common set of operational items (e.g., similar items or cuing items). The number of sets supported is not unlimited.
5.5.4	The vendor's adaptive algorithm has the ability to impose constraints, including but not limited to item type, benchmark designation, calculator status, passage identification, text sets, enemies, item exposure tolerance, multiple administrations at student level.
5.5.5	The vendor's algorithm will select the field test items. This separate field test algorithm interfaces with the operational adaptive algorithm for the purposes of balancing item types and benchmarks.
5.5.6	The vendor's field test algorithm will insert field test items in a manner that caps the number of administrators by item to allow for the appropriate replenishment of the item pool.

Task ID	Work Task
5.6	**Cut Over and / or Parallel Processing**
5.6.1	The vendor will be responsible for comprehensively testing its applications and ensuring its services provide a stable platform for assessment.
5.6.2	Each system component must be made accessible to MDE staff in a non-production environment that comprehensively mimics the production (i.e. pre-production) environment such that MDE is able to conduct its own application tests and be assured that the application test responses represent the exact behavior that will be expected of the application in the production environment.
5.6.3	Prior to implementation, the vendor will provide MDE access to the pre-production environment to conduct end-to-end systems testing.
5.6.4	MDE will be allowed no fewer than 5 business days to conduct testing of any system component and 10 days to conduct any system- wide tests. The vendor may request shorter MDE User Acceptance Testing windows during Fall 2011 if contract transition issues arise.
5.6.5	The vendor must provide application testing opportunities far enough in advance that failure to meet approved specifications can be corrected in time for deployment based on the outcomes of MDE application tests.
5.6.6	The vendor must provide comprehensive simulations of the adaptive test-delivery application that considers all variables that would impact the performance of the test-delivery application (e.g. pool size, test specifications, grade level restrictions, cognitive demand as appropriate).
5.6.7	The vendor must document the plan for application testing and the results of the application tests. Both the testing plan and the subsequent results of the testing plan must be provided to MDE with sufficient time such that MDE can ensure the approved system specifications are met.
5.6.8	The vendor will notify MDE within four (4) hours of any material change to the pre-production environment that might affect application testing being conducted by MDE.
5.6.9	The vendor shall produce ad hoc reports to address specific management questions as requested by MDE.

6. Materials Production

Task ID	Work Task
6.1	**Materials Development/Production**
6.1.1	The vendor will be responsible for the development, design, formatting, proofing and editing of all test materials (paper and online) required for the administration of the assessments.
6.1.2	The vendor will develop and design materials according to specifications provided by MDE and in the Guidelines for Test Construction.
6.1.3	The vendor will produce materials according to specifications in the Materials List identified in Attachment 11.12 of the RFP. In addition to this Materials List, the vendor shall support the Additional Senior Reading MCA Retest Opportunity for up to 2000 students. Seniors who were not proficient on the Reading MCA or have not yet passed the online Reading GRAD retest will have an additional paper retest opportunity in April. These students may take the Reading MCA-II on the same days in April that the grade 10 students take it. As with other paper testing on the Materials List, the vendor shall provide all materials production (including labels), appropriate manual sections, distribution, collection, processing, typical early reports and shall, upon MDE direction, invoice districts for each answer document returned.
6.1.4	The vendor will document and adhere to a plan for version control across all materials development.
6.1.5	The vendor will provide prior to formatting any forms, sample layouts and type styles and sizes to MDE for selection and approval.

Task ID	Work Task
6.1.6	Allowance will be made by the vendor for MDE to review and approve materials at all appropriate stages of production as negotiated in the schedule.
6.1.7	The vendor will obtain permission from MDE in electronic or hard copy to produce the final printer's proofs or before publishing electronic tests.
6.1.8	The vendor will design answer documents and computer-delivered assessments that are psychometrically sound, that allow items and student responses to remain secure during test administration, and that provide students with the best opportunity to respond to each test item and accurately collects responses. The vendor will also develop materials to maintain student anonymity during the entire performance scoring process.
6.1.9	The vendor will design answer documents with space for over printing or applying student identification pre-code/pre-ID barcode label containing student demographic information and for recording all student demographic data for new students or in the event that demographic information is not correct. The answer document will collect test codes and accommodation codes.
6.1.10	All versions of materials produced by vendor will be proofread for consistency, grammatical correctness and typographical error before submitting to MDE. At least two prime vendor staff members will thoroughly proof the materials at each stage of the process. Proofers must have copy editing/proofing expertise, be familiar with Minnesota style/guidelines and demonstration of high accuracy.
6.1.11	In the case of extensive errors (errors are egregious and obvious to casual reader) discovered by MDE, MDE will discontinue its review and request the vendor conduct a thorough review and make corrections before MDE continues reviewing. The vendor will be responsible for making up the time lost in the schedule for making corrections.
6.1.12	The vendor will document all proofreading rounds. MDE requires at least one round of proofreading be conducted by the vendor staff other than those in test development however test development must be involved in final review.
6.1.13	The vendor will have independent content expert reviewer (who has not seen items before) take each test at printer proof stage or prior to publishing and compare to answer key. Any discrepancies will be reported to MDE.
6.1.14	Should corrections be required to the final version (printer's proof for paper), the vendor will provide MDE with documentation of corrections and await final approval to print or load to production. If major corrections or changes are required to final version, a second (corrected) version will be provided to MDE.
6.1.15	In the case MDE project personnel ask for non-critical changes at the final version stage (i.e., those changes not affecting student ability to answer a question), the approval of the MDE Director or the Assistant Commissioner or their designee will be required before the vendor proceeds with changes. MDE will accept the consequences of any rescheduling or printing delays this action may incur.
6.1.16	The vendor has the ultimate responsibility for error-free production of materials. The vendor at no additional cost to the MDE shall reproduce any materials produced with any error. Problems with the production of materials will be documented and included in the final project report. The number and percentage of documents meeting and not meeting specifications will be reported.
6.1.17	Within the limits of the Materials List referenced in 6.1.3 , the vendor will be responsible for the printing of all test materials at quantities specified on enrollment counts, with a 10 percent school and 5 percent district overage if requested by district for all regular print materials. Accommodated materials will be at quantity ordered. Final numbers are based on MDE enrollment file plus district accommodated orders and additional orders. MDE will communicate with the vendor early and regularly throughout the school year about District plans to minimize unexpected, large variations in the actual number of students testing on paper.
6.1.18	The vendor will have a knowledgeable staff member at the printing site during printing, gathering, trimming, and binding. MDE may request review of

Task ID	Work Task
	any forms or to be present during press checks.
6.1.19	The vendor will incorporate and document the steps to maintain security during material production, including: • Unauthorized personnel will not be allowed access to electronic secure materials or allowed in the receiving, check-in, document processing, or materials assembly areas unless accompanied by authorized staff. • Confidentiality of individual data will be maintained at all times. • Client confidentiality and privacy will be maintained. • All electronic files will be maintained at password-protected work stations and accessible only to key personnel on the project team. • Vendors must guarantee adherence to security standards before assessments are submitted for production.
6.1.20	The vendor will crosscheck all final materials for accuracy and consistency at the stage in which materials are close to being "finalized." Preferably first print runs for paper. The multi-way check will be across all versions (i.e., check all test books against answer documents and Test Monitor Directions and accommodated materials, check MTAS Test Administrator Manuals, Response Option Cards, Presentation Pages and object lists against each other, etc.). Multi-way checks will be done with two people; one acting as the administrator and one acting as the student. The administrator will read the directions to the student confirming instructions align to the test instruments and the student will take the test to verify the materials align. The multi-way check will be complete before materials are shipped or available for online.
6.1.21	The vendor will make revisions to incorrect materials delivered to districts. Revised materials will be delivered no later than the date negotiated with MDE, but preferably before the first day of testing. Vendor will provide MDE frequent, detailed updates regarding delivery date.
6.1.22	Files of the final printed non-secure materials will be provided to MDE by the vendor in a PDF format for posting to MDE's website upon request.
6.1.23	The vendor will send to MDE a minimum of two (2) copies of each test form and answer documents from the first print run including accommodated materials and manuals.
6.1.24	Following development for an assessment within 30 days after the test window closes, the vendor will provide: 1. a copy of all test materials for paper-based tests in both source and published format on CD. 2. a PDF or comparable representation of all online fixed form tests. 3. test items and online blueprints for online adaptive forms viewable within the vendors online Item Bank.
6.2	**Accommodations**
6.2.1	Accommodated materials will be developed by the vendor according to specifications provided by MDE and in the Guidelines for Test Construction. Accommodations will be produced according to specifications in the Materials List.
6.2.2	The vendor will provide MDE 5 days for review at each stage for accommodated materials.
6.2.3	For accommodations, over the course of the contract, the vendor will develop two forms per grade for MCA and MCA-Modified as assessments align to revised standards and create Braille and Large Print versions of each.
6.2.4	The vendor will produce one form in contracted and un-contracted Braille for each operational assessment (except MTAS) for each grade and content. Supplemental instructions regarding transfer of student response to answer documents will be provided to test monitors as well as Test Administrator Notes which may be secure materials and require tracking. This applies to MCA and MCA-Modified until two static forms can be developed.
6.2.5	The vendor will produce Braille tests following MDE requirements. During the production of Braille two certified proofreaders will proof Braille books.

Task ID	Work Task
6.2.6	The vendor will assure that graphics used in large print materials use appropriate shading and are appropriately enlarged. Graphics accompanying measurement items will be given additional review to ensure lines to be measured are the appropriate length and proportionality preserved.
6.2.7	The vendor will produce Large Print books that will lay flat when opened.
6.2.8	Online accommodated tests will have audio built into the operational online assessment so a separate CD is not required.
6.2.9	Online accommodated tests will include accommodations outlined under Systems & Online Engine section of this Scope of Work.
6.3	**Manuals**
6.3.1	Manuals will be produced by the vendor according to specifications in the Materials List.
6.3.2	The vendor will use experienced and skilled writers to write manuals or new procedures as necessary to reflect the current testing processes that are clear and concise and of test publisher quality. This process should include input and review by the vendor's Project Management staff most familiar with the project.
6.3.3	The vendor will proofread manuals to ensure instructions and references in the manuals are aligned with the mode of test administration (e.g., test books and answer documents) and they are free of typographical and format errors before review by MDE.
6.3.4	Manuals, as well as all other materials, will be considered final only with electronic or hardcopy approval from MDE.
6.3.5	The vendor will provide Word and PDF files for manuals compatible with MDE Communications requirements for the MDE website according to the agreed upon schedule.
6.4	**Misc. Materials**
6.4.1	MDE produces materials for a variety of audiences including parents. Materials for parents require translating by the vendor into all languages spoken by at least 1% of the population enrolled in MN Schools (currently nine). Not to exceed an average of 600 pages per year across all languages.
6.4.2	The vendor will develop and prepare a web-based interactive Interpretive Guide to assist district and school personnel and parents in interpreting and communicating the information found in reports for Minnesota Assessments.

7. Distribution

Task ID	Work Task
7.1	**Pre-Code/Pre-ID Barcode Procedures**
7.1.1	MDE's Division of Information Technologies will provide a school level file of enrollment counts. The vendor will load this student information into the ordering system and serve as the default for quantity of materials to ship to public school districts with the exception of accommodated materials and alternate assessments which are ordered by districts. Nonpublic Schools will order all materials directly through the vendor, or through the vendor's online system.
7.1.2	For each school year, MDE will provide a file designating each Minnesota school as online or paper testing, or online by subject. MDE will provide continuous, daily updates to a student-level file to be used to provide a method for pre-coding answer documents or preloading for computer-delivered assessments. For most online administrations daily pre-code files will be provided and run throughout the testing window to provide the most current student data. The pre-code file for GRAD will include the test form assignment by MDE for each student.
7.1.3	The vendor will develop and implement efficient procedures for pre-coding and pre-identifying answer documents using "pre-code/pre-ID" barcode

Task ID	Work Task
	labels and overprinting pre-ID information directly on the answer document. Districts will have the choice of identifying a label or pre-print of student information for answer documents during the on-line ordering/registration process. Default will be printed documents.
7.1.4	The vendor will work with the MDE to determine the default order that pre-coded answer documents or labels will be collated and provided to each school (e.g., alphabetically by school, grade, teacher/class, and student). Districts have the option to use the sort order field in MDE's Test WES. The vendor will produce preprint answer documents and labels in the order indicated by the sort order field.
7.1.5	Districts have the option to use the pre-code indicator in Test WES. The vendor will use the pre-code indicator provided by MDE to identify which students will take which test. This informs which materials to provide and students to load for online assessments, by school or by subject by school.
7.1.6	MDE will provide the vendor a file of changes for large Minnesota districts (enrollment over 10,000- currently 15 districts) to pre-code between delivery of the pre-code file and agreed upon date for vendor to create a second round of (late) labels on a schedule that is mutually determined by vendor and MDE.
7.1.7	The vendor will use a printing process to apply the student information and any barcodes directly on the answer document or labels so scanners can accurately and completely read the information. The vendor will be responsible for pre-coding student population and for providing a five percent overage of blank answer documents to each school for students who do not have a pre-coded answer document, within the limits of the Materials List referenced in 6.1.3.
7.2	**Distribution of Minnesota Assessment**
7.2.1	The MCA-III in mathematics grades 3 - 8 is administered as a CAT and also in static paper form(s). MDE is estimating the 2011-2012 administration will have 75% of the students will be online and 25% will be paper and that each year five percent of schools will move to online (CAT) testing. Mathematics in grade 11 will be paper until 2014 when administered online. Some accommodations for the online assessment are paper based.
7.2.2	The MCA-II in reading is a paper-based until 2012. In 2012-2013 MCA-III Reading will be administered online and also in static paper form(s). The test is scheduled to be administered as a CAT no later than 2013-2014 with a static paper option continuing.
7.2.3	Science is an online assessment. Some accommodations for the online assessment are paper based.
7.2.4	The GRAD retests for reading and mathematics will be available via online once per month for a one week window. November 2011 will begin the first administration under a new contract. Paper based accommodated forms will be sent by vendor upon district request.
7.2.5	The GRAD Writing is currently paper-based. Census administration is in spring for grade 9. There are three retest opportunities for grades 10 -12 (November, April and July). Paper will continue in the near term even when test moves to online.
7.2.6	The GRAD Writing will be available online in 2012-2013. It will be available online once per month for a one week window. It will be primarily scored using artificial intelligence. The vendor should budget for a second, human read for all students not passing. (Current pass rate is about 90%.)
7.2.7	The MCA-Modified mathematics in grades 5 - 8 is online only. Some accommodations for the online assessment are paper based. Grade 11 will be paper until 2014.
7.2.8	The MCA-Modified reading is paper until 2013 when MCA-III is administered online and then will be online only. Some accommodations for the online assessment are paper based.
7.2.9	The MTAS is paper based with teacher scores entered online by teacher or district.
7.3	**Paper-Based Distribution**

Task ID	Work Task
7.3.1	Quantities of materials provided for each school will be calculated by the vendor based on enrollment plus a 10% overage. Accommodated and alternate assessment materials will be distributed at actual requested quantities. Packing lists will indicate the number of test materials being packaged, the number of shrink wrapped packages, and the security ID numbers of secure materials being shipped to the school, as well as all other non-secure materials being shipped to the district or school. Packing lists will also serve as inventory lists on which District and School Assessment Coordinators can check off materials they have received.
7.3.2	The vendor will work with MDE to create security procedures that are consistent across projects to maintain confidentiality.
7.3.3	The vendor will pre-assign test materials and will produce school-level test materials security forms, which list the range of security numbers and each security number of test materials assigned to each school.
7.3.4	File will be loaded to the vendor's electronic system for use by districts to track materials electronically. A security check list will also be provided to both district and schools.
7.3.5	The vendor will produce check in kits by assessment that will contain instructions for inventorying, administering and storing material and all the necessary control forms and manuals.
7.3.6	The vendor will provide return kits by assessment that will contain instructions for preparing completed materials for shipment to the vendor and all of the necessary control forms, materials identification labels, and shipping labels and/or bills of lading.
7.4	**Paper-Based Packaging/Shipping**
7.4.1	The vendor will verify there are no errors in the packaging by matching the starting and ending security numbers to the packing list and ensuring there are no gaps to the numbering sequence between packages. Vendor will have an individual familiar with MN materials pull one district out of every 50 districts, selecting minimally one school to verify materials packaged are correct and match packing list.
7.4.2	The vendor will provide MDE upon request a report that summarizes the number of test books (and their corresponding test book security numbers), answer documents (where applicable), and other test materials distributed to each school and district.
7.4.3	The vendor will ship materials in one complete shipment to arrive no later than two weeks (10 business days) prior to the beginning of the testing window and will take into consideration districts closed for spring break. Vendor will work with districts that need materials delivered on an earlier schedule because of spring break. Delivery to a district should be made in one shipment and not spread over the day or days.
7.4.4	The vendor will package each school's materials separately and in quantities indicated on the packing list. A list will be provided in box 1 identifying contents of all boxes. The district box will contain a copy of each school's packing list. Each package will be properly sealed and will weigh no more than 30 pounds. Vendor will package boxes so least amount of box filler is required. The vendor will provide Minnesota with environmentally sensitive methods for prepacking and packaging.
7.4.5	The vendor will place a label on the end of each box that will identify the school for which the materials were packed. This label will be placed in a visible location. This label will also identify the box number within the consecutive range of boxes packaged for a site. The last box packaged for a site will be identified with "Box Y of Y" (where "Y" represents the total number of boxes for the site) and will include a "packing list enclosed" stamp. A color-coded label identifying the assessment will also be included on the box.
7.4.6	In the event that errors or problems are encountered, the vendor will take the following actions: 1) the problem will be corrected immediately, 2) the problem will be recorded on a Quality Control Sheet (developed by the vendor), and 3) the cause of the error will be addressed immediately. MDE will

Task ID	Work Task
	be notified.
7.4.7	Contracted freight carriers will be used to ship test materials to the Minnesota districts; all shipping costs will be assumed by the vendor. The shipping contractor will be identified and all shipping, receiving, and packaging details must be complete so that the manuals and directions that require this information can be completed as scheduled.
7.4.8	MDE requires shipment tracking numbers for couriers to assist in communications with districts available in the administration system. This would include proof (i.e., signature, date and time) of delivery to district.
7.4.9	The vendor will provide the option to deliver to and return from the individual school, or deliver to and return from a central district location. Or a combination as determined by the district. The vendor will collect deliver/return option during the registration verification process.
7.4.10	The vendor will arrange for deliveries to be made during normal district hours. All shipments will be designated as "inside deliver required" and require a signature of receipt.
7.4.11	When materials are picked up from the vendor, the shipper will notify the district/school offices via e-mail. The e-mail communication will contain the ship-to address, number of packages sent, total weight, scheduled delivery date, and tracking numbers.
7.4.12	The vendor will track and monitor outbound package delivery via online tracking system, and the vendor will obtain proof of delivery at the time materials are received by the districts and schools. In the event of delays or shipping errors, the vendor will work closely with the shipper and the district/school office to deliver the packages the fastest available method available from UPS or FedEx. For any shipments not delivered according to pre-determined timelines, the vendor will make every effort to locate and deliver within 24 hours after discovery of the delay. The vendor will monitor each package's progress until all materials have been delivered. MDE will be notified immediately if there are variances from scheduled deliveries and a status report will be provided.
7.4.13	If there are packaging irregularities or if a district is in need of more materials, the Districts will be able to order online or call the vendor's Minnesota Customer Service representatives who will document all communication to fill the orders. Replacements for mispackaged materials will be shipped to arrive in district fastest available method available from UPS or FedEx. The vendor will be responsible for any costs related to shipping and delivery of additional or missing material. Additional orders will be delivered per MDE specified timeline. Back orders are to be avoided but if necessary MDE will be notified and back orders will be filled per MDE specified timelines.

8. Collection and Processing

Task ID	Work Task
8.1	**Procedures of Data Identification, Receipt Control, Scoring and Editing**
8.1.1	The vendor will work with MDE to develop methods to accurately identify test results by student, grade, subject, school, and district.
8.1.2	The vendor will prepare and provide to MDE thorough processes and documentation related to each of the key phases of student identification, assessment processing and reporting.
8.1.3	The vendor's staff will work with the MDE to gather requirements for both paper and online administrations, document and design the processing rules, edit specifications, data analysis, and reporting (paper and online). ISR report designs will be reviewed and approved by MDE prior to development. All documentation will be in MDE agreed upon format.

Task ID	Work Task
8.1.4	The vendor will track and compile the types of errors occurring during the implementation of the assessments and return of materials for scoring, including incorrect coding of demographic, failures to return materials according to instructions, failure to set up online administration properly, missing secure materials, etc. This information will be provided to MDE upon request and will be included in the Final Administration Report.
8.1.5	The vendor staff will document any instance of a suspected breach of test security and will immediately notify MDE, providing as much documentation as possible.
8.1.6	MDE and the vendor will agree on the schedule for processing results for embedded field test and operational items.
8.2	**Quality Control Procedures for Data Capture, Editing, and Scoring**
8.2.1	The vendor will provide MDE answer documents gridded or online assessments populated per specifications provided for use in MDE control district process. Control district documents or online assessments will be processed just like any other district materials. The control district will also be used to QC all steps from materials ordering and online setup through reporting.
8.2.2	The vendor will verify the accuracy and quality of the reporting software by creating a mock set (test decks) of answer documents gridded to cover an expansive set of grid values, blanks, and double grids in each scanned field as directed by MDE for a state control district. A similar process for verification of online will be performed by vendor. Vendor will send confirmation in writing to MDE with results before any scoring begins.
8.2.3	The vendor will provide a plan to verify the accuracy and quality of the adaptive algorithm for MDE's approval at the beginning of the contract period and to be reviewed annually. The vendor will submit an annual report to MDE with the results of the verification procedure prior to the opening of the test window.
8.2.4	As part of field testing, the vendor will implement an adjudication process for technology-enhanced items and gridded response to verify all correct responses are identified. The process will include a frequency of early responses to help identify answers that should be included as correct in operational testing.
8.2.5	To ensure reasonably expected statewide data, the vendor will compute frequency distributions for all fields within the statewide population. This includes all organizational unit information, all student identification information fields, all student demographic fields, all accommodation and special codes for assessments or growth and all scores with accompanying fields. The vendor will send these results to the MDE for review. The vendor will review expected data against actual data at least once during processing and again after all records.
8.2.6	To ensure the data are complete, the vendor will analyze each record to identify the absence of critical and/or mandatory data. The absence of certain data will either cause subsequent processing to abort and/or detrimentally affect the integrity of scoring results and aggregation totals. The vendor will work with the MDE to agree upon the fields that must contain data and those allowed to be blank
8.2.7	Following any data verification and quality control procedures, the vendor and the MDE will collaboratively judge the reasonableness of the results and distributions. The vendor will make corrections as necessary for unreasonable data and repeat the quality check procedures until the data is judged to be clean and accurate.
8.2.8	All scoring and report files will be tested by the vendor's QA staff according to pre-defined, structured test plans, which ensure the scoring and reporting software is thoroughly tested and working correctly. The test plans as well as data files will be provided to the MDE for additional review. Early files will be exchanged to verify systems are operational before live data is available.
8.3	**MTAS Field Auditors**

Task ID	Work Task
8.3.1	The vendor will hire up to ten auditors recruited by MDE who are paid a daily rate of $200 plus reimbursed for all travel expenses to visit districts and observe MTAS administrations. Five days of observations and one day for logistics and scheduling observations are paid for each region audited. The MTAS Field Auditors Procedures Manual contains training and other information for auditors.
8.3.2	The vendor will select school sites eligible for an audit following the sampling procedures defined by MDE. The vendor will maintain a list of districts that are required for an audit and track which districts were audited in previous years. These lists will be provided to MDE for notification of schools.
8.3.3	The vendor will assign auditors in an efficient manner to audit selected school sites.
8.3.4	The vendor will prepare auditor materials, such as a list of schools sites by region, school communication tracking forms, and the auditor procedures manual. MDE will provide materials used in prior years.
8.3.5	The vendor will collect auditors' data, including school sites visited, and reports of findings electronically during the auditor observations and hard copy once observations are completed. The vendor will provide access to the information entered electronically during the observations and compile all data in a comprehensive spreadsheet. This information will be provided to MDE annually in a format consistent with the technical manual yearbook.
8.3.6	The vendor will provide MDE a comprehensive report that will be used to improve future administrations.
8.3.7	The vendor will reimburse auditors for time and travel to MDE for one day of auditor training prior to observations and one day of debriefing following test administration. If in-person training will not be held, the vendor will create interactive, multi-media training modules in commercially available software as described in the Communications, Training section.
8.3.8	The vendor will ship sample copies of MTAS testing materials for the auditors to reference while observing and print and ship all auditor materials needed for each region.
8.3.9	The vendor will provide pre-paid postage, boxes, etc., for MTAS auditors to send back their materials, score sheets, and reimbursement forms.
8.4	**Collection and Check in Answer Documents, Online Test Records and Secure Materials**
8.4.1	The vendor will collect answer documents and secure materials in separate returns per MDE agreement. Writing will be one collection of answer documents only.
8.4.2	The vendor will create control forms for School and District Assessment Coordinators to complete as they prepare materials for return.
8.4.3	The vendor will use return labels color coded by secure vs. non-secure and will include the name of the assessment, the school name and address, and any other pertinent information in a consistent manner for all assessments that the MDE deems necessary.
8.4.4	As answer documents are received, boxes will be counted by the vendor to ensure the same number of boxes are received at the vendor as the shipper indicated were picked up from the districts. The vendor will immediately follow up on any discrepancies.
8.4.5	After boxes have been received and all packages for the district have been accounted for, the boxes will be opened and answer documents will be checked in by the vendor following procedures documented and agreed upon by MDE.
8.4.6	The vendor will collect student responses for all online assessments. Responses from students who have started an assessment online but have not completed or closed out will also be collected.
8.4.7	The vendor will contact districts to resolve materials discrepancies as soon as discovered. MDE and the vendor will agree on a list of discrepancies that will automatically trigger notification and follow-up, but the vendor should identify other discrepancies that indicate significant variance from

Task ID	Work Task
	expected returns. The vendor will provide a list of districts to MDE no later than one week after the district return date should the vendor and the district be unable to resolve discrepancies.
8.4.8	Test Administration Reports will be scanned and forwarded to MDE by the vendor as a sortable electronic file or a PDF file in alpha order by district and school within district no later than two weeks from processing materials. The PDF will contain both Test Administration Reports submitted online and those sent back with test materials.
8.4.9	The vendor will develop and implement receipt control procedures ensuring 100% accounting for all secure material including used and unused test materials distributed to and collected from school districts.
8.4.10	Within 30 days after testing window closes or before the end of the school year whichever is earlier a Secure Missing Document Report that identifies missing secure materials by district, school, and grade will be produced by the vendor. For GRAD retests this occurs monthly within 15 days after the testing window for the accommodated materials. All secure documents that are not returned by a district or school will be listed on the report and appropriate follow-up will be made by the vendor, including two letters and a phone call, asking that secure materials are accounted for and/or appropriate documentation has been provided. Secure materials reported by the district as missing from their original shipment or reported to MDE as being lost or destroyed will not be included on the missing materials report. The list of districts with missing documents will be reported to MDE for additional follow up. The vendor will provide MDE with complete documentation of the steps that were taken by the vendor and the district or school to locate secure materials. The final report will be provided electronically in alpha order by district and school within district.
8.5	**Scan Answer Documents**
8.5.1	The vendor will distinguish at least sixteen levels of mark intensity to evaluate paper quality, ink levels, and the intensity of marked responses for each book processed. The vendor will distinguish and recognize light marks versus erasures or smudges and intended responses versus poor erasures on an item. Books that are lightly marked or marked inconsistently are flagged for clerical editing and correction, if necessary.
8.5.2	The vendor will run quality control reports upon completion of editing to ensure all detected errors have been reviewed and a final disposition has been determined.
8.5.3	The vendor will perform a validation before batches can be extracted for scoring. This ensures that all requirements for final processing have been met.
8.5.4	The vendor will provide MDE with documentation of scanner tests as requested.
8.5.5	If requested, the vendor will deliver the scan file to MDE including scanned multiple-choice responses and the associated answer documents.
8.6	**Storage**
8.6.1	The vendor will store all scored answer documents at a secure facility until securely destroyed based on the MDE retention schedule even when the dates are beyond the contract dates. This will include all materials used to capture student responses for scoring. Scannable test books will be classified as answer documents for the purpose of this section. The vendor shall follow the current MDE retention schedule. If an update to the MDE retention schedule changes from the MDE retention schedule dated 9/26/2005, MDE and the vendor will agree on changes to the vendor's prices.
8.6.2	The vendor will store student responses to online assessments based on the MDE retention schedule even when the dates are beyond the contract dates.
8.6.3	The vendor will retain documentation of returned materials after each administration for the duration of the contract.

Task ID	Work Task
8.6.4	The vendor will ship or destroy all forms, student response records and other materials returned by the districts in accordance with MDE's retention schedule.
8.6.5	The vendor will not supply any materials connected with this project to anyone without prior written approval of MDE.

9. Performance Scoring

Task ID	Work Task
9.1	**Performance Scoring of Written Composition**
9.1.1	In the GRAD Written Composition each writing composition will be scored by the vendor using a holistic scoring model. Student responses will be scored using a 6-point scale (1-6). Two readers will independently score each essay, and a third reader will resolve the scores of the first two readers when their scores are not adjacent.
9.1.2	Non-passing GRAD Written Composition (holistic scores of 1 or 2) will be scored by the vendor using an analytical scoring model. One reader will score each composition on a satisfactory/non-satisfactory dichotomous scale in each domain: Composition, Style, Sentence Formation, Usage/Grammar, and Mechanics/Spelling.
9.1.3	The vendor's performance scoring training staff will participate, in conjunction with development staff, in rubric development so the item- specific rubrics are fairly well finalized at new item review. Minor revisions to rubrics may be made as they are being used to score sample responses during range-finding. Responses with consensus scores from range-finding, and those that illustrate important concepts of the scoring rubrics, will be used to create the scoring guides and training, qualifying, and recalibration sets used to train and monitor readers.
9.1.4	The vendor's scoring site will be a secure facility with access limited to staff and to visitors accompanied by authorized staff. If distributed scoring is used appropriate security measures will be taken to ensure confidentiality of Minnesota students' responses.
9.2	**Artificial Intelligence Scoring**
9.2.1	The vendor will use automated scoring engines that use explicit or statistical rubrics to score all operational constructed response items. The number of constructed-response items by subject are outlined in the Test Development Plan. Field test responses are used to train the scoring engine.
9.2.2	The vendor will provide an automated scoring engine that uses statistical rubrics for the online writing assessment.
9.3	**Range-finding (GRAD Writing) and Rubric Validation (Machine-Scored Constructed Response Items) Requirements**
9.3.1	The vendor's scoring specialists will prepare for range-finding by "pre-scoring" a large sample of responses to each constructed-response item. This pool of responses will include borderline responses—papers that do not fit neatly into one of the score levels and that represent some of the decision-making problems faced by scorers.
9.3.2	Range-finding will occur at MDE or another site agreed upon by MDE and the vendor. The range-finding Advisory Panels will consist of current or recently retired educators. The results of range-finding will be scored responses to be used to construct the scoring guides (containing annotated responses at each score point) and training, and retraining/recalibration sets. The final scoring guides, training papers, and recalibration sets will all be approved by MDE prior to their use.
9.3.3	For writing, vendor will develop one anchor set of 20 compositions, three practice sets of 10 compositions and three qualifying sets of 10

Task ID	Work Task
	compositions.
9.3.4	Test development specialists will review and discuss anchor papers/sets and scorer comments with the vendor's performance scoring staff after range-finding. Content staff will then arrange conference calls between MDE, vendor performance scoring and content staff to discuss any lessons learned that may be useful for the next round of item development.
9.3.5	The vendor will be responsible for monitoring and noting group discussions and annotating their copies of the student responses. The notes will be used to support the training of scorers, helping to ensure that scorers understand and implement the panel's wishes, and to provide benchmark points for discussion in subsequent year's range-finding meeting, helping guarantee longitudinal consistency of scoring protocol.
9.3.6	RESERVED
9.3.7	Field test range finding and scoring activities will be on a slightly delayed timeline compared to the operational scoring if agreed upon by MDE and the vendor.
9.4	**GRAD Writing Readers**
9.4.1	The scoring guides, training sets, and qualifying sets will be used in the initial training of readers. Recalibration sets will be given daily for the first week (1-2 per day) and as needed thereafter (or at other intervals at MDE's request) for the duration of human scoring.
9.4.2	Copies of the scoring guides, training sets, qualifying sets and scoring reports will be provided to MDE in PDF format.
9.4.3	MDE will oversee the training process through visits, conference calls, and review of status reports.
9.4.4	Readers will have at least a four-year college degree, and be comprised of a cross section of age, ethnicity, and gender targeted to be representative of Minnesota demographics. Readers' college degree will be in English, language arts, education, mathematics, science, or related field. The Technical Report is to include a summary of reader qualifications.
9.4.5	Readers are required to sign confidentiality agreements stating they are aware of the secure nature of the work.
9.4.6	Readers, like team leaders, must demonstrate accuracy in their scoring before they can begin assigning scores to live responses by qualifying (meeting an acceptable agreement rate [usually 70-80% exact agreement plus 90% adjacent agreement] with the true scores on at least one of the qualifying sets). The second set may have no lower than 60% exact agreement. Any reader who does not meet the qualifying standard will be dismissed.
9.4.7	Writing will be scored with Inter-rater Reliability and a Validity of at least 65%.
9.5	**GRAD Writing Performance Scoring Reports**
9.5.1	At a minimum, performance scoring reports will be run by the vendor twice each day of human scoring so project leadership can study the day's scoring and plan the following day's retraining activities. All of the reports will be submitted upon request to MDE.
9.5.2	Daily and Cumulative Inter-rater Reliability Reports by Item and Scorer: These reports provide information about how many times scorers were in exact agreement, assigned adjacent scores or required resolutions. The reliability is computed and can be monitored daily and cumulatively for the project. These reports produced by the vendor will be provided to MDE upon request.
9.5.3	Daily and Cumulative Frequency Distributions: These reports show how many times each score point has been assigned to the item being scored. They are produced both on a daily basis and cumulatively for the entire scoring project. This report allows scoring directors and scoring supervisors to see if scorers have a tendency to score consistently high or low. These reports produced by the vendor will be provided to MDE upon request.
9.5.4	At the conclusion of each scoring session, the vendor will provide a final report summarizing all procedures used to score the responses. The vendor

Task ID	Work Task
	will document all problems encountered, scoring decisions made, and suggestions for process improvement. Appended to the report will be copies of all training materials; reader training, qualifying, and recalibration reports; cumulative reader reliability reports; and score point distribution statistics for each item.
9.5.5	The summary report, which includes the field test item evaluations, will be provided by the vendor to MDE in an agreed upon format at Data Review Advisory Panels to inform discussions.
9.6	**Alerts**
9.6.1	Readers will "alert" responses that need to be brought to the attention of the Scoring Directors and/or Project Leaders. Copies of the alert and non-secure item response will be forwarded to districts. The vendor will provide a summary at the end of scoring of total number and by reason of alerts by district. Student names should not be sent to MDE. The MDE may require the vendor to void student test scores.
9.7	**Machine-scored Constructed Response Items**
9.7.1	The vendor will offer a process for developing high-quality operational rubrics for machine scored constructed response items. After initial development, which is done by item developers, rubrics are field-tested. Field-test responses go through a Rubric Evaluation and Verification for Items Scored Electronically (REVISE) process. This process is very similar to range-finding, with the following differences: • Responses are selected through a stratified sampling mechanism designed to over-represent anomalous responses. • Reviews are typically completed by a smaller committee. • Refinements to the rubrics can be tested against the entire field-test bank of responses to detect unintended effects of the changes. Reading, math, and science constructed response items will go through the REVISE process to validate machine-scored rubrics, covering approximately 45 responses to each item reviewed by committees over 8-10 days each year. MDE may choose to structure the science constructed-response items as a range-finding within these constraints.

10. Scoring

Task ID	Work Task
10.1	**Test Maps (Answer Keys)**
10.1.1	The vendor will use the MDE-approved test maps layout for form-based assessments.
10.1.2	For fixed form tests, the vendor will submit final test maps (answer keys and item-standards assignments) to the MDE for independent verification of all test maps prior to approval of forms to go to print or published to production. Discrepancies between MDE and the vendor will be noted and resolved, and vendor will verify in writing the corrections made. The vendor is ultimately responsible for the accuracy of the test maps.
10.1.3	To ensure 100% accuracy in scoring responses to multiple-choice and technology-enhanced test items, the vendor will verify test maps are correct by having vendor staff actually take all available fixed-form tests and compare staff responses against the test maps prior to the test administration window opening.
10.1.4	The vendor will score the multiple-choice, gridded responses and computer scored technology-enhanced items using the production keys or rubrics. The production keys or rubrics being used in the scoring programs will be finalized with the MDE.

Task ID	Work Task
10.1.5	For post-equated tests, a second type of answer key verification will be done using live student responses. When there have been a significant (pre-agreed upon) number of responses collected, the vendor will produce, in report and/or data file form, item-total correlation and item frequency distributions for all multiple-choice responses within the collected population. This data will be compared to the test maps in order to identify possible errors in the production keys or errors in the response data. The report provided to MDE will include, item-by-item, the total number of responses along with the number and percent of students for each response, including students omitting the item. Final decisions concerning acceptable responses for machine scorable items (e.g., gridded response and technology enhanced items) will be based on the review of the frequency report by MDE staff. If test items are mis-keyed, they will be corrected before processing continues. The vendor will provide a document indicating the analysis results and the process of verification of production keys.
10.2	**Verification of Student Scores**
10.2.1	For post-equated tests, the vendor will provide MDE the preliminary score file to run early checks on the data. File formats will be determined by the Book of File Formats (BOFF) from MDE.
10.2.2	The vendor will provide a score file to MDE for verification of results by MDE's Quality Vendor upon completion of corrections and updating of the master files. A detailed description of the scaling and equating process will also be provided, complete with all supporting data, including graphs and associated statistical data at both the item and scale level.
10.2.3	The vendor will collaborate with MDE and Quality Control Vendor to conduct a review to validate all vendor-generated scores for each test administration for the length of the contract, either in advance for tests delivering immediate scores, or during processing of other tests.
10.2.4	The vendor will provide data files to MDE in an agreed-upon format on an agreed upon schedule, and upon five days' notice unless it impacts other deliverables.
10.3	**Equating and Scaling**
10.3.1	Vendor will determine an appropriate reporting scale with MDE on newly developed assessments.
10.3.2	MDE and the vendor will agree on the use of pre-equating and post-equating for establishing the final scale.
10.3.3	The vendor will use 3PL/GPC methodologies to construct pre-equated base forms based on existing item parameter estimates.
10.3.4	The vendor will use appropriate measurement models and methods for alternate assessments to construct pre-equated base forms based on the existing item statistics.
10.3.5	The vendor will calibrate 3PL/GPC items with marginal maximum likelihood (MML) estimation using the software approved by MDE and agreed upon in discussion with all vendors and TAC.
10.3.6	The vendor will calibrate items using models and software approved by MDE and agreed upon in discussion with all vendors and TAC for alternate assessments.
10.3.7	The vendor will analyze items for overall model fit by examining the residuals of the test model, investigating the patterns of item co-variation within the scale.
10.3.8	The vendor will estimate scores on a logistic metric and then transform them to scaled scores using a linear transformation.
10.3.9	The vendor will perform a secondary calibration on the embedded field-test items, and then equate them back to the operational scale through the operational item parameters.

Task ID	Work Task
10.3.10	The vendor will implement generally accepted Quality Control steps in this phase related to test maps, production keys, Item Calibration and Equating, Student and School Level Scaled Score Computation, and Investigation of Scale Drift.
10.3.11	The vendor will implement vertical scaling for MCA math and reading grades 3 - 8 and monitor vertical scale drift.
10.3.12	Any scaling, equating, or other software required to replicate vendor's results will be made available to the MDE at no cost.
10.3.13	Vendor in consultation with MDE and Minnesota TAC will develop and implement scaling and equating procedures for newly developed assessments that satisfy federal technical requirements.

11. Standards Setting

Task ID	Work Task
11.1	**Achievement Level Descriptors**
11.1.1	Achievement Level Descriptors will become part of the training implemented for all item development and test construction staff and will be applied to the design of the item development and test construction plan.
11.1.2	Achievement Level Descriptors (ALDs) will be revised by the vendor to reflect changes in test specifications at time of development after revisions to Minnesota Academic Standards are completed. This revision will follow a cycle of revisions for content as stated in Minnesota statute 120.B.23.
11.1.3	Prior to standard setting the vendor will develop ALDs in consultation with MDE.
11.1.4	The vendor will be responsible for teacher panels and associated costs to revise Achievement Level Descriptors following revisions of Minnesota Academic Standards. MDE plans to have these meetings the year the test specifications are revised for the appropriate tests.
11.1.5	Revisions stemming from the Achievement Level Descriptors meeting will be incorporated by the vendor into ALDS in consultation with MDE.
11.2	**Standard Setting**
11.2.1	Vendor will conduct standard setting using a proven and reliable method as agreed by MDE for the following assessments: 2012: MCA-III Science (grades 5, 8, HS) 2012: MTAS-III Science (grades 5, 8, HS) 2013: MCA-III Reading (grades 3 - 8, 10) 2013: MCA-Modified Reading (grades 5-8, 10) 2013: MTAS-III Reading (grades 3-8, 10) 2013: GRAD Reading (grade 10) 2013: GRAD Writing (grade 9) 2014: MCA-III Math (grade 11) 2014: MCA-Modified Math (grade 11) 2014: MTAS-III Math (grade 11) 2014: GRAD Math (grade 11) These dates may change if MDE decides to conduct standard setting based on field test data and then revisit those provisional standards after the first operational year. The vendor will present a plan for setting college- and career-readiness international benchmarks on the high school MCA-III in

Task ID	Work Task
	science, reading, and mathematics by embedding secure PISA items in the MCA assessment. The vendor will implement the approved plan.
11.2.3	Vendor is responsible for all costs associated with the Standard Setting including facilities, stipends, etc as described for other panel meetings in the Vendor Guide to Advisory Panels.
11.2.4	Vendor will be responsible for developing materials and training plan for MDE approval.
11.2.5	Vendor will work with panelists to develop and refine achievement level descriptors.
11.2.6	Vendor will work with panelists to develop familiarity with the test materials (events).
11.2.7	Vendor will work with panelists to develop consensus-based definition of cut points to differentiate the prescribed achievement and proficiency levels.
11.2.8	Vendor will convene an articulation panel of stakeholders from outside the educator community at the conclusion of standard setting to smooth cut scores across grade levels.
11.2.9	All vendor facilitators and their credentials will be reviewed and approved by MDE two months prior to the meeting.
11.2.10	Vendor will have sufficient staff on site for the entire meeting to address logistics.
11.2.11	All vendor facilitators must remain in attendance for the entire panel meeting including articulation.
11.2.12	Vendor will assist MDE with presentation of results for peer review and other accountability purposes.
11.2.13	Vendor will provide a final comprehensive report.

12. Reporting

Task ID	Work Task
12.1	**Report Development**
12.1.1	The vendor shall develop reports consistent with the overall reporting design for the Minnesota Assessment System approved by MDE. Major development of variable text content for score reports shall be developed when the new Series III tests are reported for the first time under this contract. Otherwise reports are expected to remain consistent with only possible minor changes from year to year and have a similar look across tests. The vendor will make any report changes based on academic standards changes and legislation changes. The vendor will take its direction from MDE for the development and quality review of reports.
12.1.2	The vendor will work with MDE and designated educators and stakeholders in the design of printed reports, as MDE deems appropriate.
12.1.3	For Printed ISRs, the vendor will produce report mock-ups that will be identical to final production reports and be publish-ready for report interpretive materials. These mock ups will be representative of various test conditions as directed by MDE. After mockups and report function specifications have been reviewed and approved by the MDE, the vendor will develop and test the programs to produce them.
12.1.4	Vendor will produce reports based on a publishing Student Data File (SDF) that will be provided by MDE after posttest editing is complete in Test WES. This includes invalidating tests identified by MDE. GRAD and early reports will be produced from the publishing SDF that is approved by MDE after each administration.
12.1.5	The vendor will provide MDE with report functional specifications that describe data, calculations, formats, reporting levels and reports to be produced. These will be part of the documentation the vendor is responsible for producing. The documentation will provide enough detail in these

Task ID	Work Task
	areas to ensure a common understanding among all parties responsible for producing and verifying quality results.
12.1.6	The vendor will produce review materials and plan for MDE involvement for each report phase that includes activities, timelines, personnel and facilities. For each phase, the vendor will include MDE in the process as follows: 1. The vendor's quality assurance group(s) will conduct rigorous review of flow of data from online or paper testing to the online and print reports. Quality Assurance documentation will be provided to MDE. The vendor also will work with MDE-provided data for testing. 2. The vendor will produce a live data file and paper/electronic reports with sample districts as chosen by MDE and control district for MDE review. Retests will be the complete file containing all students who tested. 3. The vendor will work closely with MDE to resolve questions and correct problems. 4. The vendor will post and/or ship reports after review and approval of QC process by MDE.
12.1.7	The vendor will provide field test results to MDE. If requested by MDE a field test summary report at the school level with state, district and school data will be produced for stand-alone field tests.
12.1.8	The vendor will laser-quality print all home copies of individual student reports (ISRs) and deliver as directed in 12.2.9. Printable student reports will be retrievable through the electronic reporting system and educators will be able to access the reports by student.
12.1.9	The vendor will produce MCA ISRs as a four-page color document printed on an 11x17" paper, folded and printed for all home copies.
12.1.10	If the Alternate Assessment (MTAS and Modified) individual student results cannot be integrated into the MCA ISRs, the vendor will produce a stand-alone, four-sided color document printed on an 11x17" paper, folded and printed for all home copies.
12.1.11	The vendor will produce GRAD Writing and Alternate Assessment Writing as a one-page, stand-alone ISR which is a two-sided, color document.
12.1.12	The vendor will provide GRAD printable individual student reports for retests electronically in a secure format to the district for distribution within two weeks of each testing window. Paper reports will follow at quarterly intervals.
12.1.13	The vendor will meet reporting timelines for spring assessments as early as possible with public release of assessment results no later than June 30 when standard setting is not required. MDE will work with the vendor to set a mutually agreeable testing and reporting schedule each year.
12.1.14	The vendor will develop methodology for providing instant preliminary results for online, pre-equated and electronically scored assessments. In this context, "preliminary" means the final score, but not necessarily that the score will be used in AYP reporting.
12.1.15	The MDE expects the vendor to report Lexiles based on contracted research with MetaMetrics on the MCA for Reading. The vendor will interact with such a third-party to report these results.
12.2	**Report Production/Distribution**
12.2.1	During the course of this contract the vendor will be ready to implement a new file structure that complies with School Interoperability Framework (SIF) requirements and is highly flexible such as XML.
12.2.2	The vendor will provide reporting that eliminates paper reports and yet still makes results accessible to all stakeholders. As all families do not have equal access to online reports, the vendor will produce printed Individual Student Reports (ISRs). For all other reports, the vendor will deliver powerful, easy-to-use analytic tools for educators and pre-determined data files and reports to educators through the vendor's online reporting system, rather than on paper and CD.
12.2.3	Electronic reports will be maintained by the vendor for all test administrations for the life of the contract and can easily be used for reference and

Task ID	Work Task
	reprinting purposes.
12.2.4	Electronic reports shall be delivered through a browser in HTML format and may be downloaded in a spreadsheet readable format. Printable student reports will be retrievable through the electronic reporting system and educators will be able to access the reports by student.
12.2.5	Following authenticated sign-on, the vendor's system will present the user with a secure Web page using industry standards security protocol. The system interface will be designed to be flexible and easy to use. The reporting system shall enable nontechnical users to navigate intuitively. Rather than organizing around specific reports, the vendor system shall begin by showing each user relevant, high- level summary data—essentially aggregate scores for the user's (teacher-level, school-level, district-level, etc.) own students for each grade and subject available. All users of the system will be required to log in for access.
12.2.6	The vendor staff will conduct quality assurance checks of print quality and alignment, correct number of copies, accurate printing of school and district names and numbers, printing and correct assembly of all reports for all schools within the district and accurate production of shipping labels. Vendor will provide documentation of established quality checks.
12.2.7	The vendor will use the packaging organization established by MDE.
12.2.8	Printed Individual Student Reports will be boxed together and labeled accordingly by the vendor. The vendor will produce a "report packing list" which will identify the report and their packaging sequence within the box. Student labels will be provided, if requested by District.
12.2.9	The vendor will ship all printed Individual Student Reports to the district or school offices as selected by the district, based on recipient/address information provided by MDE.
12.2.10	Districts can contract with the vendor at reasonable cost to have the vendor send hard copy reports directly to parent/guardians using protocol the vendor establishes. This option would be between vendor and district without MDE involvement. MDE will determine if the ISRs are self-mailers in the initial design stage.
12.2.11	The vendor will enter data for up to 100 MTAS missed opportunity students that are approved by MDE. Early reporting graduation letters, final individual reports, and student labels (if district requested) will be generated and provided for the districts.
12.3	**Reports**
12.3.1	The vendor will provide MDE a Student Detail File (SDF) for equating/scaling after receipt of materials for all applicable administrations.
12.3.2	**Early Reports applies to Grade 9 Writing GRAD census test; Grade 10 Reading MCA/GRAD, MTAS and Modified; Grade 11 Math MCA/GRAD, MTAS and Modified; and Alternate Assessment Writing** The vendor shall develop and implement an appropriate quality assurance process to ensure all student responses are flowing from testing on paper or online to the reporting system. The vendor shall present MDE and its QC vendor documentation of the process for MDE approval, and will provide documentation/data using test/simulated data to allow MDE to verify accurate processing prior to deployment for each test. The vendor will provide Districts the ability to download the following within 3 weeks after the close of the testing window: • Graduation letters

Task ID	Work Task
	• Printable Rosters • Excel Rosters
12.3.3	**Timely Electronic Assessment Results applies to all online and paper assessments** For pre-equated online tests, the vendor will develop methodology for providing real-time results for online, pre-equated and electronically-scored assessments. Online versions are printable by district. For paper and online post-equated tests, the vendor will transfer data to the online reporting system after MDE approval of equating (and standards if necessary).
12.3.4	**Final Electronic Assessment Results applies to all assessments** The vendor shall deliver student data files (agreed upon record for each test taken) on a schedule (up to nightly) or on demand. This service shall be available to the state as well as to individual districts. These data flows and associated formats shall be established before the start of each school year.
12.3.5	**Final Hardcopy Assessment Results applies to all assessments** ***Individual Student Reports (only)*** ***Reports to deliver to Districts*** • ***Paper to District*** o ISRs (home copy if directed in 12.2.9) Score of record for accountability is provided for online assessments o Student Labels, district option • ***Data to District*** o Final School Alpha Rosters, printable and downloadable through online reporting system or data files in 12.3.4 • ***Data to School*** o Final School Alpha Rosters, printable and downloadable through online reporting system or data files in 12.3.4 o ISR (hard copy if so directed in 12.2.9 and not sent to District) o Student writing images available in online reporting system ***Final Reports to MDE (in online reporting system)*** • Districts and School Alpha Rosters , printable and downloadable through the online reporting system or data files in 12.3.4 • All Individual Student Reports printable through the online reporting system
12.3.6	**Final Reports for Writing GRAD Retests** • ***Materials sent to MDE by Vendor to QC*** o SDF with all students who participated in retest

Task ID	Work Task

	o ISR
	    o Labels
	
	  • ***Reports available to districts in online reporting system***
	    o Student Report
	    o Rosters
	
	  • ***Reports printed and shipped to districts (or schools if directed in 12.2.9 and not sent to Districts)***
	    o ISR
	
	  • ***Reports available to districts in online reporting system***
	    o Roster
	    o Labels
	    o Student essays
	
	Note: When Writing is offered as an online assessment, reporting will be similar to GRAD reading and math retests.

12.3.7	**Final Reports for Reading and Mathematics GRAD Retests**
	  • ***Monthly—Materials sent to MDE by Vendor to QC***
	    o SDF with all students who participated in retest
	    o ISR
	    o Roster (alpha), printable or downloadable from the online reporting system
	
	  • ***Monthly—Reports available to districts in online reporting system***
	    o ISR
	    o Roster , printable or downloadable
	  • ***Quarterly—Reports printed and shipped to district***
	    o ISR
	    o Roster PDF (alpha) Labels, if requested

12.4	**Score Appeals**
12.4.1	The vendor will rescore any response coming through an official appeals process, managed through the vendor system. Score changes will result in new individual student reports being generated and sent to district. Responses to a rescore request require review by MDE before communication is made to the district. The vendor will turn around appeals within three days, with paper reports to follow the close of the appeals window.
12.4.2	The vendor will provide MDE with a summary of score appeals and outcomes in an agreed upon electronic format.

Task ID	Work Task
12.4.3	The vendor is allowed to charge the district for each score appeal, returning the fee if there is a score change. This fee will also apply to district requests to search for and score answer documents that (a) were returned improperly and (b) such requests are made after the regular scoring window.
12.4.4	The vendor will enter scores not entered or process student responses that are submitted in a rescore or late entry process to be included with MDE data clean up system (Test WES) or straggler file. Vendor will produce and send individual student reports and labels to the district. An updated SDF if provided to MDE. The vendor is allowed to charge the district a reasonable rate agreed by MDE. This will be honored up to the final rescore date printed in the Important Dates of the annual Minnesota Assessments Procedures Manual.
12.4.5	Vendor will send to MDE results of GRAD rescore request that result in a not pass status change for MDE approval before sending to the district.

13. Psychometric Analysis and Support

Task ID	Work Task
13.1	**Psychometric Analysis and Support for Assessments**
13.1.1	In consultation with and with the consensus of the Minnesota TAC, the vendor will provide the following research and technical support (or equivalent vendor effort) necessary for USED Peer Review. Alignment studies and comparability studies include: 1. Construct validity studies commonly using a factor analysis method for each grade and subject 2. Convergent and discriminant validity studies commonly using a multi-trait multi-method matrix (MTMM) 3. Documentation of test reliability using classical item statistics, including classification consistency 4. Consequential validity study using focus groups with teachers, administrators, parents, and students 5. Support for independent alignment studies using Webb alignment of items and statistical analysis that shows each student sees an appropriate range of content and across all students the full set of testable standards are covered 6. A study to examine the comparability of online versus paper/pencil test administrations
13.1.2	Vendor will implement comparability studies for online and paper assessments described in 13.1.1.
13.1.3	The vendor's psychometricians will implement guidelines for vertical and horizontal linking sets for MCA-II.
13.1.4	The vendor's psychometricians will develop guidelines and implement the analysis for vertical and horizontal linking of MCA-II to MCA-III.
13.1.5	The vendor will compute classical item statistics using SAS, SPSS, or other commercial software that also applies logic to flag inconsistencies or other statistical values that may be out of range. The procedure should compute raw and adjusted p-values, point bi-serial and item-total correlations, percent of students responding at each score point, reliability statistics, etc.
13.1.6	The vendor will provide MDE with a detailed plan for the calculation and reporting of DIF statistics.
13.1.7	Scaling design will be determined by MDE in discussions with the vendor when implementing new test specifications.
13.1.8	Subsequent to each operational administration, the vendor will provide a report containing the following information: • The reliability of the scale scores. • The test information function and comparisons to information functions for previously developed forms. • The validity of the test form as indicated by: 1) estimated correlation between scale score and latent proficiency (construct validity evidence);

Task ID	Work Task
	2) judgments concerning the consonance between the test items and test specifications (content validity evidence); and 3) statistical and graphical summaries of the accuracy of the form equating.
13.1.9	The vendor will load item parameters into the item management system.
13.1.10	The vendor will submit psychometric guidelines for test construction of operational forms to MDE for review and approval.
13.1.11	The vendor will analyze, calibrate/vertically scale reading & math operational tests.
13.1.12	The vendor will analyze, calibrate, scale and equate science assessments.
13.1.13	All technical analysis will be appropriately reported in the technical manual.
13.1.14	The vendor will provide state-of-the-art data forensics annually. The vendor will work with MDE to define the specific forensic analyses to be conducted.
13.1.15	The Vendor will provide additional Peer Review and online migration support. MDE will request the specific, individual tasks as they arise, within the overall scope of approximately 1500 AIR staff hours (or equivalent) plus some limited travel and other direct expenses.
13.2	**Psychometric Analysis and Support for Census GRAD Assessments**
13.2.1	Scaling design will be determined by MDE in discussions with the vendor when implementing new test specifications.
13.2.2	Subsequent to each operational census administration, the vendor will provide a report containing the following information: • The reliability of the scale scores • The test information function and comparisons to information functions for previously developed forms • The validity of the test form as indicated by: 1) estimated correlation between scale score and latent proficiency (construct validity evidence); 2) judgments concerning the consonance between the test items and test specifications (content validity evidence); and 3) statistical and graphical summaries of the accuracy of the form equating.
13.3	**Technical Manual and Yearbook**
13.3.1	At the conclusion of each operational assessment or stand-alone field test cycle, vendor's Lead Psychometrician will work collaboratively with operational, psychometric, and development and technical staffs and MDE Quality Vendor to produce a Technical Manual and Yearbook outlining the statistical analysis and psychometric quality of the items, standards, and tests, including item development for that year.
13.3.2	Technical documentation will also include procedures and processes used to develop, administer, score, and report. MDE will approve the format and list of tables and/or information to be included by the vendor.
13.3.3	The vendor will deliver a Technical Manual and Yearbook no later than 30 days from the time of delivery of hardcopy student reports to the districts.
13.3.4	MDE's Quality Vendor and the Technical Advisory Committee (TAC) will review the annual Technical Manual and Yearbook before the vendor produces the copy for publication.
13.4	**Minnesota Technical Advisory Committee (TAC)**
13.4.1	Vendor will arrange meeting logistics and reimburse TAC members for their service to MDE. An additional twenty five (25) hours of phone consultation and conference calls per TAC member will be included. In addition vendor will cover expense for one TAC member to attend all standard setting workshops.
13.4.2	MDE requires vendor participation at the TAC meetings. MDE holds three, two-day TAC meetings annually. In addition the vendor will participate in ad

Task ID	Work Task
	hoc TAC conference calls.
13.4.3	The vendor will collaborate with MDE on setting the agenda for the TAC meeting.
13.4.4	Vendor will prepare any materials for the TAC necessary to support agenda topics as requested by the MDE. They will be available for distribution no later than one week before the meeting.

14. Benchmark Assessments

Task ID	Work Task
14.1	**Benchmark Assessments**
14.1.1	Vendor will provide an online multi-platform Benchmark Assessment for grades 2 - 11 in mathematics, reading, science and writing that assesses student achievement and growth.
14.1.2	Vendor will field-test and calibrate the items for the benchmark assessments concurrently with the items for the summative assessment and implement the same (or a slightly extended) blueprint used for the summative assessment. This approach will allow the summative and benchmark scores to be compared and plotted together over time. MDE and the vendor will agree on a methodology for the grade two benchmark assessment.
14.1.3	Vendor will demonstrate item alignment to content standards for both MCA-II and MCA-III (when operational) if appropriate. MDE will work with the vendor to determine the approach for the GRAD.
14.1.4	Benchmark assessment will be delivered securely through exactly the same system as the online summative assessments. Hence, the benchmark assessments will not require any additional software, training, or in-school support beyond what is required for the summative assessment, and will offer the same look and feel, the tools, and the broad range of accommodations available in the summative assessments.
14.1.5	Results will be delivered through the same reporting system, so no additional training will be required for teachers to access, explore, and use the results. Similarly, users will have immediate access to the same system of teaching and learning supports, as described in Section 15
14.1.6	Benchmark assessment will allow teachers to track individual student performance over multiple formative test administrations of the same subject. The Benchmark assessment will track over years and by subject.
14.1.7	RESERVED
14.1.8	RESERVED
14.1.9	RESERVED
14.1.10	RESERVED
14.1.11	The vendor will include the same types of items in the benchmark assessment as the summative assessment.
14.1.12	For Math, Reading, and Science, the items on the test will be drawn from one of three sources: (1) Items developed specifically for the MCA (excess items from existing pools or newly developed items) from Task 3; (2) Items shared from other States; and (3) Items from the TerraNova.
14.1.13	For Writing, the vendor will develop and field-test 15 to 20 writing prompts per grade in Minnesota, gather and score responses, and train the writing engine. The vendor will maintain ownership of the prompts and rubrics, and will bear the development and analysis costs. MDE will provide support in attaining cooperation and participation of Minnesota schools during the field test and vendor will provide human scores to all scored responses. MDE will maintain a perpetual, royalty-free license to use the prompts in the state of Minnesota, along with scoring documentation such as training sets

Task ID	Work Task
	and anchor papers. The benchmark writing assessment will be scored by the same engine as the GRAD writing assessment.
14.1.14	Once during the contract, MDE and the vendor will develop a set of blueprints for the use of the benchmark assessments. These blueprints may be to deliver the Benchmark Assessments as independent assessment (separate, additional opportunities) with blueprints identical or very similar to that of the summative assessment. Alternatively, using the same item pool, MDE may work with the vendor to create alternative blueprints that combine features of summative and benchmark assessments.
14.1.15	The vendor shall field-test the items during 2011-12 school year within the embedded and independent field tests used for the summative assessments, and the items to the same scale as the summative assessments.
14.1.16	The vendor will work with MDE content experts to design benchmark assessment blueprints that accurately reflect the content and contain a sufficient number of items to measure a typical school year of growth at the MDE's desired confidence level. The vendor will report the precision of scores and change scores and conduct simulation studies to validate the accuracy of those estimates given the real item bank.
14.1.17	The vendor will work with MDE to balance benchmark assessment length with acceptable standard error of measurement, with the minimum being the minimum number of items required to cover the academic content standards (the construct being measured).
14.1.18	All benchmark assessments shall be operational for the 2012-13 school year, and will be fully integrated with the Online Reporting System (Task 12) and Learning Supports (Task 15).
14.1.19	Schools will have substantial control in administering the benchmark assessments, including the ability to determine when assessments are administered; assign students to take specific assessments; assign specific accommodations to students; receive immediate reports by individual, subgroup, and school-defined groupings, and follow any desired grouping longitudinally; and track student progress over the year and across years, including tracking individual students, cohorts, and school-defined groupings of students.
14.1.20	Once the tests are established, the vendor will provide correlational evidence that performance on the benchmark assessment opportunities predict subsequent performance on summative assessment opportunities.

15. Teaching & Learning Supports

Task ID	Work Task
15.1	**Teaching & Learning Supports**
15.1.1	Vendor will provide teaching and learning supports that are a companion to the information derived from the Minnesota Assessment system in reading, mathematics, science and writing. They system will be initially populated with activities in mathematics and English language arts (ELA). Additional vendor provided activities will be added to build up the bank of resources at no additional cost. SciMath Minnesota activities will be added to the system visa direct "parameterized" web links (links in a structured format that can be automatically generated by the vendor from the grade, subject, standard, and benchmark). Other MDE-developed activities may be added to the system; the cost to integrate these other MDE-developed materials to be negotiated as a scope change.
15.1.2	The vendor will provide to classroom teachers, a system that is web-based and informative with east-to-use features to enable educators to navigate the system in order to identify and learn to deliver effective, research-based instruction strategies in the classroom for each benchmark in the Minnesota Academic Standards. The system must be capable of being utilized effectively by all stakeholders within the school, district, and MDE.

Task ID	Work Task
15.1.3	The vendor will provide to parent and students, a system that is web-based and provide student activities that could be used in school or at home. Activities are aligned to summative or formative assessment and are intended to improve students' performance in areas of weakness or accelerate their learning in areas of strength.