Smarter Balanced Assessment Consortium:

Preliminary Test Blueprints

November 28, 2012

Note: This User's Guide is a supporting document to the Draft Blueprints approved by Governing States November 20, 2012.

Executive Summary

The purpose of this document is to:

- Explain to member states, districts, and other stakeholders what a test blueprint is in general and what's different about the Smarter Balanced blueprints;
- Describe the Smarter Balanced summative blueprints; and
- Provide information on how the blueprints will be used and their importance to the summative assessment and to the Smarter Balanced Assessment System.

Test blueprints communicate the content of the test and how that content will be assessed to a wide variety of audiences. Therefore, this User's Guide is intended to serve as a supporting document to help the full array of potential users understand the purposes and uses of test blueprints, as well as provide more specific information as to how to accurately read and interpret the Smarter Balanced blueprints and assessment target sampling tables.

To that end, this Smarter Balanced Assessment Consortium Blueprint User's Guide describes the following:

- What is a blueprint?
- What is different about the Smarter Balanced blueprints?
- How were the Smarter Balanced summative blueprints developed?
- How are the Smarter Balanced blueprints structured?
- How will the blueprints be used?
- What are the next steps for the summative blueprints?

Data gathered through Pilot and Field testing, and ongoing simulation studies will inform updates to the blueprints, including setting the weights each content area contributes to the overall composite test score for ELA/literacy and mathematics. Consistent with the draft blueprint development process, updates to these blueprints will involve input from member states, vendor partners, Smarter TAC, and other stakeholders.

The establishment of the Smarter Balanced summative assessment test blueprints represents an important milestone in the Consortium's assessment development activities. Reaching this milestone is the result of concerted efforts and broad input from Consortium member states, executive staff, partners, vendors, and stakeholders, consistent with the Consortium's culture and governance structure.

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What Is a Blueprint?

All valid and valued assessments are content driven. Successful completion of the assessment development process requires deep understanding of the knowledge, skills, and abilities that are measured on an assessment, and how these are derived from the content standards upon which the assessment is based. Not only is understanding of the specific content important, developers and users must also know the relative weighting among the various content strands to be included on the assessment, the item types used to measure each strand, and other key factors such as depth of knowledge spread within and across strands/standards/indicators.

Specifically, a test blueprint is a formal document that guides the development and assembly of an assessment by explicating the following essential information:

- **Content** (standards, indicators, claims) that is to be included for each assessed content area and grade, across various levels of the system (student, classroom, school, district, state);
- **Emphasis and Balance** of content, generally indicated as number of items or percentage of points per standard and indicator;
- **Item Types**, sending a clear message to item developers how to measure each standard and indicator, and to teachers and students about learning expectations; and
- **Depth of Knowledge (DOK)**, indicating the complexity of item types for each standard or indicator.[1]

The test blueprint is essential for both assessment developers and for those responsible for curriculum and instruction. For assessment developers, the blueprint (and related test specifications documents) declares how the test will ensure coverage of the full breadth and depth of content and how it will maintain fidelity to the intent of the content standards on which the assessment is based. Full alignment is necessary if educational stakeholders are to make valid, reliable, and unbiased inferences at the student, classroom, school, and state levels.

For those responsible at the instructional level, the test blueprint provides a guide to the relative importance of competing content demands and suggests how the content is intended to be demonstrated, as indicated by item type and depth of knowledge. For example, standards and assessment targets that are shown to be assessed with items at lower levels of DOK require different instructional methods than content assessed at higher levels of DOK.

In summary, an assessment blueprint provides clear development specifications to test developers and signals to the broader education community both the full complexity of the Common Core State Standards (CCSS) and how performance on these standards will be operationalized.

The Governing States of the Smarter Balanced Assessment Consortium have adopted preliminary blueprints for the summative assessments of mathematics and English language arts/literacy for grades 3–8 and high school. These blueprints are referred to as “preliminary” because they establish assessment design features that may be subject to refinement and revision after the analysis of Pilot and Field testing. Final blueprints for the Smarter Balanced summative assessments will be adopted by Governing States prior to full implementation in the 2014-15 school year.

[1]While often included in the assessment blueprint, Smarter Balanced includes this information in its Target Sampling Table companion document.

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What Is Different about the Smarter Balanced Blueprints?

The goals, assessment model, and governance structure of the Smarter Balanced consortium have had profound effects on the blueprints that have been developed and approved to build its assessment and support its other key components. As indicated above, blueprints must fully reflect the standards on which its assessments are based. The Smarter Balanced summative assessments will provide measures of student progress on and attainment of the CCSS in grades 3–8 and high school. The CCSS have several unique features that have affected the contents of the Smarter Balanced blueprints. The "Balanced" in Smarter Balanced refers both to our model of an interconnected system of summative, interim, and formative components, as well as a balance between technologically advanced computer adaptive testing (CAT) and extended, thematically related performance tasks. This latter feature of the balance between CAT and performance tasks is captured in our blueprints. Finally, building an assessment for a 25-state consortium creates an additional set of challenges not found in state-specific assessments.

- Common Core State Standards: As states implement the CCSS, there is increasing realization that they are qualitatively different from most of the state standards that have preceded them. Specifically, what they require from an assessment and instructional standpoint are:
  - Greater emphasis on depth of student understanding, resulting in significant increase on overall depth of knowledge;
  - Use of a different array of item types (i.e., selected response, constructed response, performance tasks, and computer enhanced), with a greater emphasis on student demonstration and transfer of knowledge and skills;
  - Use of common stimuli with different entry points (scaffolding) for students at different achievement levels; and
  - Non-traditional content (e.g., listening, research, contextualizing ELA in content areas like science and social studies, attention to mathematical processes).
- Balanced Assessment System: A key feature of the Smarter Balanced assessment model is a commitment to developing a comprehensive system of assessments and assessment tools that can contribute to improved teaching and learning. This system includes the availability of efficient summative assessments whose primary responsibility is to be used for accountability purposes, and interim assessments and formative tools to support instruction. The summative and interim components will be placed on the same reporting scale, allowing student progress on the interim assessment to be used to track likely performance on the summative. Our system has the following implications for the summative blueprints:
  - Summative assessments—ensure full breadth and depth and fidelity to CCSS to allow reliable and valid reporting of our content claims;
  - Interim assessments—aligned sufficiently to summative to allow scaling and tracking requirements; may also include a wider range of content based on learning progressions to allow more precise tracking of student learning; and
  - Formative tools and practices—though not "assessments" per se, Smarter Balanced will develop exemplary tools and professional development materials to improve the quality of day-to-day assessment that takes place in the classroom. To be effective, the alignment between the summative assessments and the supports in the formative component must be clear and explicit. The summative blueprints support this alignment.

- **Assessment Structure**, especially CAT and performance tasks: The Smarter Balanced assessment system has two features not typically found in most current state assessments that have important effects on our blueprints. The inclusion of performance tasks (PTs) and a reliance on CAT technology have the following specific implications:
  - Performance tasks: Performance tasks are scenario-based sets of materials and items/tasks that cohere around a single theme, or real-world problem. The items/tasks comprising each PT require greater amounts of time to administer than more traditional selected- and constructed-response items. The points allocated for these significant events must be commensurate with the time students will spend on them. The content of PTs focus on those aspects of the CCSS that rely on research, problem solving, and application and transfer of knowledge, including higher DOK levels (3 and 4).
  - Computer adaptive testing: As each student takes a computer adaptive test the test delivery system adjusts the difficulty of the items to be tailored to how the student is performing on the assessment. This means that students do not receive the same items, unlike a "fixed-form" test where all students see the same items. Thus, blueprints for assessments with a CAT component must provide acceptable lower and upper bounds for the number of items to be presented for each assessment target. Our CAT blueprints ensure sufficient breadth and depth at the student level to obtain a reliable score across our claims and full breadth and depth across students at the classroom level. Therefore, the full breadth of content must be taught; however, the burden of testing the entire breadth of content will not be placed on each student.
- **Multi-State Consortium**: Most states develop their assessment blueprints with varying degrees of involvement across the state, with individuals or groups participating as part of content committees, performing psychometric analyses, and/or serving as reviewers. For a multi-state consortium such as Smarter Balanced, the process is the same, but the level of scrutiny is exponentially greater. Smarter Balanced governance rules require Governing States to approve important policy documents such as the test blueprint. Equally important, the Smarter Balanced culture includes an expectation of extensive member state involvement, not just in the review and approval of the blueprint, but also in its development. Finally, because of the strong public interest in the success of the various state assessment consortia, the Smarter Balanced executive staff has involved several outside groups in the blueprint development and review process, most importantly our Technical Advisory Committee and the developers of the CCSS. Table 1 indicates the extensive Smarter Balanced blueprint review and approval process. Following, we describe the specific role played by Smarter Balanced staff, member states, and various outside partners.

Table 1. Smarter Balanced Blueprint Review and Approval Process

Smarter Balanced Blueprint Review and Approval Process	
07/25–26	Presentation of two-version approach to Technical Advisory Committee (TAC): TAC recommends common blueprint across both versions
08/29–30	USED site visit: USED indicates reporting more than total composite score will be required for the "Standard" version
09/10–14	Presentation of two-version design to state leads and Chiefs, with expanded reporting
09/18	Assessment Management Group discussion of two-version design
10/02	Assessment Management Group review and recommendation of revised test design and blueprints with a single design reporting all claims

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10/09	All States discussion of test design and blueprints
10/22	Notice to Governing States of discussion and voting period
10/23	Discussion during Governing States meeting
10/24	Technical Advisory Committee discusses and provides input
10/29	Chiefs discuss and provide input
10/29–11/05	Voting period: First ballot (approval requires 100% consensus)
11/06–11/11	Review of questions/concerns if consensus not reached on first ballot
11/12–11/19	Voting period: Second ballot (approval requires 2/3 majority)
11/20	Consensus approval by Governing States on second ballot: Blueprint adopted

How Were the Smarter Balanced Summative Blueprints Developed?

- **Role of CCSS**: As indicated above, the Smarter Balanced assessments must reflect the content and performance expectations of the CCSS. Our blueprints must result in assessments with sufficient length to measure the breadth of the CCSS and with the appropriate range of item types, including performance tasks, to measure its depth. All staff and partners working on the blueprint development, either internal or external, needed to have extensive knowledge of the structure and content implicit in the CCSS. To ensure full fidelity, Smarter Balanced executive staff enlisted the aid of the lead authors of these standards.
- **Role of Executive Staff and Work Groups**: Smarter Balanced leadership developed and managed the extensive blueprint development and review process. Work groups contributed not only to content but also to the final format, working with executive staff to ensure the structure of the blueprint would not only guide the assessment development process but could also be understood by teachers, administrators, curriculum developers, and policymakers in their states. The Smarter Balanced lead psychometrician was primarily responsible for ensuring that the blueprints would lead to assessments that produce reliable and valid results, coordinating with the executive director and content directors on such matters of content emphasis and match of content to item types. The content directors worked in partnership with the authors of the CCSS on issues related to content. For example, the identification of the "priority" and "supporting" clusters in the target sampling tables for mathematics reflected this close collaboration.
- **Role of Governing States**: Smarter Balanced Chiefs, state leads, and other SEA staff have been directly involved throughout the blueprint development process. In February and September Chiefs were convened to engage in discussions of overall blueprint designs. Additionally, SEA staff serve as members of work groups and provide leadership to Smarter Balanced by serving as Consortium co-chairs and members of the Executive Committee. As shown in Table 1, the executive director led an all-state introductory walkthrough and discussion of the then draft blueprint on October 9, 2012, with a follow-up discussion on October 23. A similar briefing was provided to Smarter Balanced Chiefs via webinar on October 29. The approval voting period ran from October 29 to November 19, when it was unanimously ratified by the Smarter Balanced Governing States.
- **Role of External Content Experts and Contractors**: Smarter Balanced content directors guided the content aspects of blueprint development, assisted by content experts from member states participating in work group and other reviews. The content directors also coordinated with the developers of the CCSS to ensure adherence to its expectations. The psychometric service contractor, Educational Testing Service (ETS), was tasked with "pressure testing" early draft blueprints by running simulation studies designed to estimate what levels of reliability could be

provided by a test(s) using various blueprints for both the overall score (i.e., English language arts and mathematics) and the scores at the content claim level (e.g., reading, writing, math concepts and procedures). WestEd in its role of Project Management Partner (PMP) worked closely with executive staff to update the blueprints to reflect the final blueprint tables and related materials and coordinated the review and approval process.

- Role of Reviewers (USED, TAC, SAP): As funders of the Consortium, the U.S. Department of Education was given several briefings related to the blueprint and provided important feedback throughout the blueprint development process. Our TAC gave its input via an in-person meeting in July and webinar in October. Finally, Student Assessment Partners (SAP), comprising the lead authors of the CCSS, was involved extensively throughout the blueprint development process.

How Are the Smarter Balanced Blueprints Structured?

The content, emphasis, and item type information are represented in the blueprints in two levels of detail: (1) blueprint tables that provide an overview of the summative assessment in terms of how claims and item types are represented, and (2) target sampling tables that show greater detail about assessment targets within each claim, depth of knowledge, and item type representation.

- Blueprint Tables: The ELA/literacy blueprints show the number of stimuli (e.g., reading passages, listening segments) and items/tasks associated with each content category, and whether the content category is assessed using CAT items, performance tasks, or both. For example, the grades 3–5 ELA/literacy blueprint indicates that the reading claim comprises literary and informational content categories, both will be measured using stimuli that will be presented in the CAT administration, neither content category will be measured via performance task, and each will be measured using from six to eight CAT-administered items, for a total of between 12 and 16 items for reading. (It should be noted that only some of these items will be scored as dichotomous ["0-1"] items; many will be scored as polytomous [rubric-scored] items, meaning many more points on the reading portion than between 12 and 16.)

  Determining the relative contribution each ELA/literacy claim has to the overall ELA/literacy score (its weightings) requires further content, policy, and psychometric consideration. ELA/literacy claim weights have not been determined and will be established by Governing States at a later time. The mathematics blueprints are organized similarly to the ELA/literacy blueprints. For example, the grades 3–5 mathematics blueprint indicates that the Concepts and Procedures claim is broken down into Priority Clusters (Domain 1) and Supporting Clusters (Domain 2),[2] that neither content category will use stimuli, and that both will be measured via 15–20 and five to eight CAT items respectively. The grades 3–5 mathematics blueprint also indicates that Problem Solving (claim 2), Modeling and Data Analysis (claim 4), and Communicating Reasoning (claim 3) will be measured through a combination of CAT items and performance tasks, and that they will use common stimuli in the performance tasks. Consistent with ELA/literacy, the relative contribution each mathematics claim has to the overall mathematics score (its weightings) will require content, policy, and psychometric consideration, and will be established by Governing States at a later time.

- Target Sampling Tables: Target sampling tables provide greater detail regarding the specific content within each claim. The "targets" in these tables refer to the assessment targets defined

[2]The designation of Priority versus Supporting Cluster is based on the relative importance to mastering the content within the Concepts and Procedures claim.

in two documents: Content Specifications for ELA/Literacy (found here) and Content Specifications for Mathematics (found here).

The target sampling tables for ELA/literacy provide separate information for the CAT and performance task components, whereas the mathematics target sampling tables show both components in one table.

For example, the grades 3–5 ELA/literacy target sampling table (table 4a) for the CAT component indicates the seven assessment targets within the Literary content category, shows the Depth of Knowledge (DOK) associated with each assessment target, the probability a specific assessment target will appear on a test for a student (Min CAT items), that the Literary content category under the Reading claim will be measured using a minimum of three Selected Response (SR) items and one Constructed Response (CR) item (Min Item Type), totaling a minimum of 6 and maximum 8 items (Min, Max Items).

The performance task component table provides similar information; however, because performance tasks are not adaptive, information is provided in whole values, not in terms of probability or minimum or maximum ranges. For example, the grades 3–5 ELA/literacy performance task component table shows that writing will be measured within the performance task using one task (an essay) that will yield three scores. As indicated in the CAT component, writing will also be measured using 7–10 CAT items.

The mathematics target sampling tables provide the same additional content detail as the ELA/literacy target sampling tables. For example, the grade 3 mathematics sampling table indicates the seven assessment targets for the Priority Cluster under the Concepts and Procedures claim, the Depth of Knowledge (DOK) associated with each assessment target, the probability a specific assessment target will appear on a test for a student for CAT items and number of items delivered through a performance task (PT) or extended constructed response (ECR) (Min # Scored Tasks), and that the Priority Cluster under the Concepts and Procedures will be measured using a minimum of seven Selected Response (SR) and four Constructed Response (CR) items (Minimum # Items per Item Type), totaling a minimum of 15 and maximum 20 items (Min/Max Number of Items).

How Will the Blueprints Be Used?

The test blueprints are a driving force behind almost all important Smarter Balanced assessment design activities and deliverables. Below is a listing of the role the blueprints play in several key components.

- **Development of Items and Tasks**: The blueprints are critical to ensuring the sufficiency of the item pool, both for the content itself and the mix of item types to measure the content. Specifically, the blueprints, in concert with item and test specifications documents, drive the requirements for item and task production that are provided to our contractors. They are also used as part of the evidence to evaluate the alignment of our item pool to the CCSS.
- **Pilot and Field Testing**: To ensure adequate tryouts of all content and item types, both the Pilot Test and the Field Test must reflect the mix of items that will be found on the operational Smarter Balanced assessments. The results from Pilot and Field testing must be fully calibrated items and tasks to support our CAT approach. While neither the Pilot nor Field Test designs need to precisely match the summative blueprint, they must at least be representative of its key features.

- **Live Test Administrations:** The operational assessments must adhere strictly to the final blueprints. As described earlier, the final blueprints for the Smarter Balanced summative assessments will be adopted by Governing States before operational use in 2014-15. Those final blueprints will draw upon lessons learned in the Pilot and Field Test phases, and will ensure that students see a sufficient number of items to support the validity of the claims made from their performance (though the actual mix and length of test for each student will differ at the tolerance level defined in the blueprint and CAT specifications). At higher grain sizes (i.e., class, school, district, state), exact adherence to the blueprint is expected.
- **Reports and Other Support Materials**: Blueprints are guided by the level of detail that is intended to be reported at the student and aggregate levels. The Smarter Balanced blueprints have been designed to allow claim-level information for each student tested, with the potential for finer grained information for classes, schools, districts, and the state (subject to validation after Field testing). The blueprint also provides important information in the development of interpretive guides to assist targeted users of all Smarter Balanced reports.
- **Standard Setting**: Blueprints are used to define the sets of items/tasks that are used for most judgmental standard setting approaches, be they item driven (e.g., bookmark method) or student performance centered (e.g., Body of Work approach). The achievement level descriptors (ALDs) which drive standard setting need to reflect student performance expectations at various grade levels, as defined by the mix of content and item types prescribed in the blueprints.
- **Smarter Balanced Validity Argument**: A validity argument is the combination of declarations and related empirical evidence that are needed to support a particular use or interpretation of a test score. Adherence to established blueprints is critical to the Smarter Balanced validity argument. The Smarter Balanced blueprints articulate how the assessment is aligned to the CCSS and provide the basis for the reliability and validity of our reporting claims. Since defensible standard setting is key to establishing validity, the importance of the blueprints in this activity is essential.

What Are the Next Steps for the Summative Blueprints?

The important role of the Smarter Balanced summative blueprints in guiding assessment development and instruction has been described throughout this document. As part of our Pilot and Field testing, Smarter Balanced will review item/task performance across all points of the blueprints. The goal is to measure the feasibility and validity of key features of our system, especially:

- the interaction of content with item types;
- a range of scoring approaches, including machine-scored items, hand scoring, and those items using artificial intelligence models; and
- success assessing content at all expected DOK levels (1-4).

We will be performing ongoing simulation studies based on our Pilot results to determine the reliability of all expected claim scores; the blueprints may need to be adjusted based on these studies. Finally, Smarter Balanced is beginning the process of establishing weights across claim scores to determine an overall composite score for each content area (ELA and mathematics) across achievement levels. This process will fully engage member states, our vendor partners, TAC, and other key constituencies.

This document contains preliminary Smarter Balanced Summative Assessment Blueprints for ELA/literacy. The document is organized to show first the blueprint tables for all grades, followed by the assessment target tables for all grades.

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Estimated Total Testing Time: 3:30 (without classroom component)

Claim	Content Category	Stimuli		Scored Tasks		Total CAT Items by Claim	Approximate Weight for Each Claim within Total Test
		CAT	PT	CAT Items	PT Ratings		
1. Reading	Literary	1	0	6-8	0	12-16	TBD
	Informational	1	0	6-8			
2. Writing	Purpose/Focus/Organization	0	1a	2-3	1	7-10	TBD
	Evidence/Elaboration	0		2-3	1		
	Conventions	0		3-4	1		
3. Speaking/Listening	Listening	2	0	8-10	0	8-10	TBD
4. Research	Research	0	1b	5-6	3	5-6	TBD

NOTES:

- All times are estimates. Actual time may vary widely.
- Each student receives 1 PT which includes a set of stimuli on a given topic.
- The CAT component of the test includes selected-response items (SRs) and constructed-response items (CRs); some of these items will be technology enhanced. The PT includes 3 research items (SRs and/or CRs) and 1 constructed-response essay that is scored across 3 categories: Purpose/Focus/Organization, Evidence/Elaboration, and Conventions.
- Each student receives an overall ELA score and claim scores at the individual level.
- Performance Task stimuli 1a and 1b reflect a single stimulus used to reflect Writing (1a) and Research (1b).

Estimated Total Testing Time: 3:30 (without classroom component)

Claim	Content Category	Stimuli		Scored Tasks		Total CAT Items by Claim	Approximate Weight for Each Claim within Total Test
		CAT	PT	CAT Items	PT Ratings		
1. Reading	Literary	1	0	4-6	0	12-16	TBD
	Informational	1-2	0	8-10			
2. Writing	Purpose/Focus/Organization	0	1a	2-3	1	7-10	TBD
	Evidence/Elaboration	0		2-3	1		
	Conventions	0		3-4	1		
3. Speaking/Listening	Listening	2	0	8-10	0	8-10	TBD
4. Research	Research	0	1b	5-6	3	5-6	TBD

NOTES:

- All times are estimates. Actual time may vary widely.
- Each student receives 1 PT which includes a set of stimuli on a given topic.
- The CAT component of the test includes selected-response items (SRs) and constructed-response items (CRs); some of these items will be technology enhanced. The PT includes 3 research items (SRs and/or CRs) and 1 constructed-response essay that is scored across 3 categories: Purpose/Focus/Organization, Evidence/Elaboration, and Conventions.
- Each student receives an overall ELA score and claim scores at the individual level.
- Performance Task stimuli 1a and 1b reflect a single stimulus used to reflect Writing (1a) and Research (1b).

Estimated Total Testing Time: 4:00 (without classroom component)

Claim	Content Category	Stimuli		Scored Tasks		Total CAT Items by Claim	Approximate Weight for Each Claim within Total Test
		CAT	PT	CAT Items	PT Ratings		
1. Reading	Literary	1	0	5-7	0	17-22	TBD
	Informational	2	0	12-15			
2. Writing	Purpose/Focus/Organization	0	1a	4-6	1	7-10	TBD
	Evidence/Elaboration	0			1		
	Conventions	0		3-4	1		
3. Speaking/Listening	Listening	2	0	8-10	0	8-10	TBD
4. Research	Research	0	1b	4-6	3	4-6	TBD

NOTES:

- All times are estimates. Actual time may vary widely.
- Each student receives 1 PT which includes a set of stimuli on a given topic.
- The CAT component of the test includes selected-response items (SRs) and constructed-response items (CRs); some of these items will be technology enhanced. The PT includes 3 research items (SRs and/or CRs) and 1 constructed-response essay that is scored across 3 categories: Purpose/Focus/Organization, Evidence/Elaboration, and Conventions.
- Each student receives an overall ELA score and 4 claim scores or subscores reported at the individual level.
- Performance Task stimuli 1a and 1b reflect a single stimulus used to reflect Writing (1a) and Research (1b).

ELA/Literacy Preliminary Summative Assessment Blueprint
Target Sampling ELA/Literacy Grades 3-5—Table 4a

Component	Claim	Content Category	Assessment Target	DOK	Min CAT Items	Min Item Type		Min, Max Items
						SR	CR	
CAT	1. Reading	Literary (1 long set)	1: Key Details	1,2	p(1)=0.5	3	1	6-8
			2: Central Ideas	2	p(1)=1.0			
			3: Word Meanings	1,2	p(1)=0.5			
			4: Reasoning and Evaluation	3,4	p(1)=1.0			
			5: Analysis within/across Text	3,4	p(1)=1.0			
			6: Text Structures and Features	2,3				
			7: Language Use	2,3				
		Informational (1 long set)	8: Key Details	1,2	p(1)=0.5	3	1	6-8
			9: Central Ideas	2	p(1)=1.0			
			10: Word Meanings	1,2	p(1)=0.5			
			11: Reasoning and Evaluation	3,4	p(1)=1.0			
			12: Analysis within/across texts	3,4	p(1)=1.0			
			13: Text Structures and Features	2,3				
			14: Language Use	2,3				
	2. Writing	Purpose/Focus/Organization	1/3/6: Write/Revise Brief Texts	2	p(2)=1.0	2	1	7-10
			8: Language and Vocabulary Use	1				
		Evidence/Elaboration	1/3/6: Write/Revise Brief Texts	2				
		Conventions	9. Edit/Clarify	1	p(2)=1.0			
	3. Speaking/Listening	Listening	4. Listen/Interpret	1,2,3	p(8)=1.0	3	2	8-10
	4. Research	Research	2: Interpret and Integrate Information	2	p(5)=1.0	1	0	5-6
			3: Evaluate Information/Sources	2				
			4: Use Evidence	3				

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
— Min CAT Items: This column describes the minimum number of CAT items each student will receive for each target. For example, for grades 3-5 ELA/Literacy *Key Details,* p(1)=0.33 indicates that each student will have a 50% likelihood of receiving at least 1 *Key Details* CAT item.

Component	Claim	Content Category	Assessment Target	DOK	Tasks	Scores
PT	2. Writing	Purpose/Focus/Organization	2/4/7: Compose Full Texts	3,4	1 (Essay)	1
			8: Language and Vocabulary Use	1		
		Evidence/Elaboration	2/4/7: Compose Full Texts	3,4		1
		Conventions	9. Edit/Clarify	1		1
	4. Research	Research	2: Interpret and Integrate Information	2	p(3)=1.0	3
			3: Evaluate Information/Sources	2		
			4: Use Evidence	3		

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
— Min CAT Items: This column describes the minimum number of CAT items each student will receive for each target. For example, for grades 3-5 ELA/Literacy *Key Details,* p(1)=0.33 indicates that each student will have a 50% likelihood of receiving at least 1 *Key Details* CAT item.

ELA/Literacy Preliminary Summative Assessment Blueprint
Target Sampling ELA/Literacy Grades 6-8—Table 4b

Component	Claim	Content Category	Assessment Target	DOK	Min CAT Items	Min Item Type		Min, Max Items
						SR	CR	
CAT	1. Reading	Literary (1 long set)	1: Key Details	2	p(1)=0.33	3	1	4-6
			2: Central Ideas	2	p(1)=1.0			
			3: Word Meanings	1,2	p(1)=0.33			
			4: Reasoning and Evaluation	3	p(1)=1.0			
			5: Analysis within/across Text	3,4	p(1)=0.33			
			6: Text Structures and Features	2,3,4				
			7: Language Use	3				
		Informational (1 long set)	8: Key Details	2	p(1)=0.5	3	1	8-10
			9: Central Ideas	2	p(1)=1.0			
			10: Word Meanings	1,2	p(1)=0.5			
			11: Reasoning and Evaluation	3	p(1)=1.0			
			12: Analysis within/across Texts	3,4	p(1)=1.0			
			13: Text Structures and Features	3,4				
			14: Language Use	3				
	2. Writing	Purpose/Focus/Organization	1/3/6: Write/Revise Brief Texts	2	p(4)=1.0	2	1	7-10
			8: Language and Vocabulary Use	1,2				
		Evidence/Elaboration	1/3/6: Write/Revise Brief Texts	2				
		Conventions	9. Edit/Clarify	1	p(3)=1.0			
	3. Speaking/Listening	Listening	4. Listen/Interpret	1,2,3	p(8)=1.0	3	2	8-10
	4. Research	Research	2: Interpret and Integrate Information	3,4	p(5)=1.0	1	0	5-6
			3: Evaluate Information/Sources	3				
			4: Use Evidence	3,4				

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
— Min CAT Items: This column describes the minimum number of CAT items each student will receive for each target. For example, for grades 3-5 ELA/Literacy *Key Details,* p(1)=0.33 indicates that each student will have a 50% likelihood of receiving at least 1 *Key Details* CAT item.

Component	Claim	Content Category	Assessment Target	DOK	Tasks	Scores
PT	2. Writing	Purpose/Focus/Organization	2/4/7: Compose Full Texts	3,4	1 (Essay)	1
			8: Language and Vocabulary Use	1,2		
		Evidence/Elaboration	2/4/7: Compose Full Texts	3,4		1
		Conventions	9. Edit/Clarify	1		1
	4. Research	Research	2: Interpret and Integrate Information	3,4	3	3
			3: Evaluate Information/Sources	3		
			4: Use Evidence	3,4		

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
— Min CAT Items: This column describes the minimum number of CAT items each student will receive for each target. For example, for grades 3-5 ELA/Literacy *Key Details,* p(1)=0.33 indicates that each student will have a 50% likelihood of receiving at least 1 *Key Details* CAT item.

ELA/Literacy Preliminary Summative Assessment Blueprint
Target Sampling ELA/Literacy Grade 11—Table 4c

Component	Claim	Content Category	Assessment Target	DOK	Min CAT Items	Min Item Type		Min, Max Items
						SR	CR	
CAT	1. Reading	Literary (1 long set)	1: Key Details	2	p(1)=0.5	3	1	5-7
			2: Central Ideas	2	p(1)=1.0			
			3: Word Meanings	1,2	p(1)=0.5			
			4: Reasoning and Evaluation	3	p(1)=1.0			
			5: Analysis within/across Text	3,4	p(1)=1.0			
			6: Text Structures and Features	3,4				
			7: Language Use	3				
		Informational (1 long set, 1 short set)	8: Key Details	2	p(1)=1.0	6	3	12-15
			9: Central Ideas	2	p(2)=1.0			
			10: Word Meanings	1,2	p(1)=1.0			
			11: Reasoning and Evaluation	3	p(2)=1.0			
			12: Analysis within/across Texts	3	p(1)=1.0			
			13: Text Structures and Features	3,4				
			14: Language Use	3				
	2. Writing	Purpose/Focus/Organization	1/3/6: Write/Revise Brief Texts	2	p(2)=1.0	2	1	7-10
			8: Language and Vocabulary Use	1,2				
		Evidence/Elaboration	1/3/6: Write/Revise Brief Texts	2				
		Conventions	9. Edit/Clarify	1	p(2)=1.0			
	3. Speaking/Listening	Listening	4. Listen/Interpret	1,3	p(8)=1.0	3	2	8-10
	4. Research	Research	2: Interpret and Integrate Information	4	p(2)=1.0	1	0	4-6
			3: Evaluate Information/Sources	4				
			4: Use Evidence	3,4				

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
— Min CAT Items: This column describes the minimum number of CAT items each student will receive for each target. For example, for grades 3-5 ELA/Literacy *Key Details,* p(1)=0.33 indicates that each student will have a 50% likelihood of receiving at least 1 *Key Details* CAT item.

Component	Claim	Content Category	Assessment Target	DOK	Tasks	Scores
PT	2. Writing	Purpose/Focus/Organization	4/7: Compose Full Texts	3,4	1 (Essay)	1
			8: Language and Vocabulary Use	1,2		
		Evidence/Elaboration	4/7: Compose Full Texts	3,4		1
		Conventions	9. Edit/Clarify	1		1
	4. Research	Research	2: Interpret and Integrate Information	4	3	3
			3: Evaluate Information/Sources	4		
			4: Use Evidence	3,4		

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
— Min CAT Items: This column describes the minimum number of CAT items each student will receive for each target. For example, for grades 3-5 ELA/Literacy *Key Details,* p(1)=0.33 indicates that each student will have a 50% likelihood of receiving at least 1 *Key Details* CAT item.

This document contains preliminary Smarter Balanced Summative Assessment Blueprints for mathematics. The document is organized to show first the blueprint tables for all grades, followed by the assessment target sampling tables for all grades.

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Target Sampling

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Estimated Total Testing Time: 2:30 (without classroom component)

Claim/Score Reporting Category	Content Category	Stimuli		Minimum # Scored Tasks		Approximate Weight for Each Claim Within Total Test
		CAT	PT	CAT	PT	
1. Concepts and Procedures	Domain 1. Priority Cluster	0	0	15-20	0	TBD
	Domain 2. Supporting Cluster	0	0	5-8	0	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	0	1	4-5	1	TBD
	Modeling and Data Analysis	0			3	
3. Communicating Reasoning	Communicating Reasoning	0		6-7	2	TBD

NOTES:

- All times are estimates. Actual time may vary widely.
- Item types: selected response (SR); constructed response (CR); extended constructed response (ECR); performance task (PT).
- Claim 2 (Problem Solving) and Claim 4 (Modeling and Data Analysis) have been combined because of content similarity and a desire to reduce test length. There are still four claims, but only an overall math score and 3 claim scores will be reported.

Estimated Total Testing Time: 3:00 (without classroom component)

Claim/Score Reporting Category	Content Category	Stimuli		Minimum # Scored tasks			Approximate Weight for Each Claim Within Total Test
		CAT	PT	CAT	ECR	PT	
1. Concepts and Procedures	Domain 1. Priority Cluster	0	0	15-20	0	0	TBD
	Domain 2. Supporting Cluster	0	0	5-8	0	0	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	0	1	3	2	1	TBD
	Modeling and Data Analysis	0				3	
3. Communicating Reasoning	Communicating Reasoning	0		5-6	1	2	TBD

NOTES:

- All times are estimates. Actual time may vary widely.
- Item types: selected response (SR); constructed response (CR); extended constructed response (ECR); performance task (PT).
- Claim 2 (Problem Solving) and Claim 4 (Modeling and Data Analysis) have been combined because of content similarity and a desire to reduce test length. There are still four claims but only an overall math score and 3 claim scores will be reported.

Estimated Total Testing Time: 3:30 (without classroom component)

Claim/Score Reporting Category	Content Category	Stimuli		Minimum # Scored Tasks			Approximate Weight for Each Claim Within Total Test
		CAT	PT	CAT	ECR	PT	
1. Concepts and Procedures	Domain 1. Priority Cluster	0	0	15-20	0	0	TBD
	Domain 2. Supporting Cluster	0	0	5-8	0	0	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	0	1	5	2	1	TBD
	Modeling and Data Analysis	0				3	
3. Communicating Reasoning	Communicating Reasoning	0		8		2	TBD

NOTES:

- All times are estimates. Actual time may vary widely.
- Item types: selected response (SR); constructed response (CR); extended constructed response (ECR); performance task (PT).
- Claim 2 (Problem Solving) and Claim 4 (Modeling and Data Analysis) have been combined because of content similarity and a desire to reduce test length. There are still four claims, but only an overall math score and 3 claim scores will be reported.

Mathematics Preliminary Summative Assessment Blueprint
Target Sampling Mathematics Grade 3—Table 6a

Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Min/Max Number of Items
				CAT	PT/ECR	SR	CR	
1. Concepts and Procedures	Priority Cluster	B. Understand properties of multiplication and the relationship between multiplication and division.	1	p(6)=1.0	0	7	4	15/20
		C. Multiply and divide within 100.	1					
		I. Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	1,2					
		G. Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	1,2					
		D. Solve problems involving the four operations, and identify and explain patterns in arithmetic.	2	p(6)=1.0				
		F. Develop understanding of fractions as numbers.	1,2					
		A. Represent and solve problems involving multiplication and division.	1,2	p(3)=1.0				
	Supporting Cluster	E. Use place value understanding and properties of operations to perform multi-digit arithmetic.	1	p(4)=1.0	0	2	1	5/8
		K. Reason with shapes and their attributes.	1,2					
		H. Represent and interpret data.	1,2,3	p(1)=1.0				

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.

— Minimum # Scored Tasks for CAT: This column describes the minimum number of CAT items each student will receive for each target. For example, in grade 3 mathematics Claim 1 Domain 2 *Represent and interpret data,* p(1)=1.0 indicates that each student will have a 100% probability of receiving at least 1 *Represent and interpret data* CAT item.

Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Min/Max Number of Items
				CAT	PT/ECR	SR	CR	
2. Problem Solving & 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2,3	p(2)=1.0	1	0	3	3
		B. Select and use appropriate tools strategically.	1,2					
		C. Interpret results in the context of a situation.	2					
		D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1,2,3					
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2,3	p(2)=1.0	3	0	5	5
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2,3,4					
		C. State logical assumptions being used.	1,2					
		D. Interpret results in the context of a situation.	2,3					
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	3,4					
		F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1,2,3					

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
— Minimum # Scored Tasks for CAT: This column describes the minimum number of CAT items each student will receive for each target. For example, in grade 3 mathematics Claim 1 Domain 2 *Represent and interpret data,* p(1)=1.0 indicates that each student will have a 100% probability of receiving at least 1 *Represent and interpret data* CAT item.

		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3,4					
Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Min/Max Number of Items
				CAT	PT/ECR	SR	CR	
3. Communicating Reasoning	n/a	B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	3,4	p(6)=1.0	2	0	3	8
		C. State logical assumptions being used.	2,3					
		D. Use the technique of breaking an argument into cases.	2,3					
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2,3,4					
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2,3					
		G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2					

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
— Minimum # Scored Tasks for CAT: This column describes the minimum number of CAT items each student will receive for each target. For example, in grade 3 mathematics Claim 1 Domain 2 *Represent and interpret data,* p(1)=1.0 indicates that each student will have a 100% probability of receiving at least 1 *Represent and interpret data* CAT item.

Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Min/Max Number of Items
				CAT	PT/ECR	SR	CR	
1. Concepts and Procedures	Priority Cluster	A. Use the four operations with whole numbers to solve problems.	1,2	p(9)=1.0	0	7	4	15/20
		E. Use place value understanding and properties of operations to perform multi-digit arithmetic.	1,2					
		F. Extend understanding of fraction equivalence and ordering.	1,2					
		G. Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	1,2	p(3)=1.0				
		D. Generalize place value understanding for multi-digit whole numbers.	1,2	p(2)=1.0				
		H. Understand decimal notation for fractions, and compare decimal fractions.	1,2	p(1)=1.0				
	Supporting Cluster	I. Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	1,2	p(3)=1.0	0	2	1	5/8
		K. Geometric measurement: understand concepts of angle and measure angles.	1,2					
		B. Gain familiarity with factors and multiples.	1	p(1)=1.0				
		C. Generate and analyze patterns.	2,3					
		J. Represent and interpret data.	1,2					
		L. Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	1,2	p(1)=1.0				

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
— Minimum # Scored Tasks for CAT: This column describes the minimum number of CAT items each student will receive for each target. For example, in grade 3 mathematics Claim 1 Domain 2 *Represent and interpret data,* p(1)=1.0 indicates that each student will have a 100% probability of receiving at least 1 *Represent and interpret data* CAT item.

Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Minimum Number of Items
				CAT	PT/ECR	SR	CR	
2. Problem Solving & 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2,3	p(2)=1.0	1	0	3	3
		B. Select and use appropriate tools strategically.	1,2					
		C. Interpret results in the context of a situation.	2					
		D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1,2,3					
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2,3	p(2)=1.0	3	0	5	5
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2,3,4					
		C. State logical assumptions being used.	1,2					
		D. Interpret results in the context of a situation.	2,3					
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	3,4					
		F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1,2,3					

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
— Minimum # Scored Tasks for CAT: This column describes the minimum number of CAT items each student will receive for each target. For example, in grade 3 mathematics Claim 1 Domain 2 *Represent and interpret data,* p(1)=1.0 indicates that each student will have a 100% probability of receiving at least 1 *Represent and interpret data* CAT item.

		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3,4					
Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Minimum Number of Items
				CAT	PT/ECR	SR	CR	
3. Communicating Reasoning	n/a	B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	3,4	p(6)=1.0	2	0	3	8
		C. State logical assumptions being used.	2,3					
		D. Use the technique of breaking an argument into cases.	2,3					
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2,3,4					
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2,3					
		G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2					

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
— Minimum # Scored Tasks for CAT: This column describes the minimum number of CAT items each student will receive for each target. For example, in grade 3 mathematics Claim 1 Domain 2 *Represent and interpret data,* p(1)=1.0 indicates that each student will have a 100% probability of receiving at least 1 *Represent and interpret data* CAT item.

Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Min/Max Number of Items
				CAT	PT/ECR	SR	CR	
1. Concepts and Procedures	Priority Cluster	E. Use equivalent fractions as a strategy to add and subtract fractions.	1,2	p(6)=1.0	0	7	4	15/20
		I. Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	1,2					
		F. Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	1,2	p(5)=1.0				
		D. Perform operations with multi-digit whole numbers and with decimals to hundredths.	1,2	p(4)=1.0				
		C. Understand the place value system.	1,2					
	Supporting Cluster	J. Graph points on the coordinate plane to solve real-world and mathematical problems.	1	p(3)=1.0	0	2	1	5/8
		K. Classify two-dimensional figures into categories based on their properties.	2					
		A. Write and interpret numerical expressions.	1	p(2)=1.0				
		B. Analyze patterns and relationships.	2					
		G. Convert like measurement units within a given measurement system.	1					
		H. Represent and interpret data.	1,2					

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
— Minimum # Scored Tasks for CAT: This column describes the minimum number of CAT items each student will receive for each target. For example, in grade 3 mathematics Claim 1 Domain 2 *Represent and interpret data,* p(1)=1.0 indicates that each student will have a 100% probability of receiving at least 1 *Represent and interpret data* CAT item.

Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Minimum Number of Items
				CAT	PT/ECR	SR	CR	
2. Problem Solving & 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2,3	p(2)=1.0	1	0	3	3
		B. Select and use appropriate tools strategically.	1,2					
		C. Interpret results in the context of a situation.	2					
		D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1,2,3					
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2,3	p(2)=1.0	3	0	5	5
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2,3,4					
		C. State logical assumptions being used.	1,2					
		D. Interpret results in the context of a situation.	2,3					
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	3,4					

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
— Minimum # Scored Tasks for CAT: This column describes the minimum number of CAT items each student will receive for each target. For example, in grade 3 mathematics Claim 1 Domain 2 *Represent and interpret data,* p(1)=1.0 indicates that each student will have a 100% probability of receiving at least 1 *Represent and interpret data* CAT item.

		F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1,2,3					
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3,4					
Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Minimum Number of Items
				CAT	PT/ECR	SR	CR	
3. Communicating Reasoning	n/a	B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	3,4	p(6)=1.0	2	0	3	8
		C. State logical assumptions being used.	2,3					
		D. Use the technique of breaking an argument into cases.	2,3					
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2,3,4					
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2,3					
		G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2					

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
— Minimum # Scored Tasks for CAT: This column describes the minimum number of CAT items each student will receive for each target. For example, in grade 3 mathematics Claim 1 Domain 2 *Represent and interpret data,* p(1)=1.0 indicates that each student will have a 100% probability of receiving at least 1 *Represent and interpret data* CAT item.

Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Min/Max Number of Items
				CAT	PT/ECR	SR	CR	
1. Concepts and Procedures	Priority Cluster	E. Apply and extend previous understandings of arithmetic to algebraic expressions.	1,2	p(6)=1.0	0	7	4	15/20
		F. Reason about and solve one-variable equations and inequalities.	1,2					
		A. Understand ratio concepts and use ratio reasoning to solve problems.	1,2	p(4)=1.0				
		G. Represent and analyze quantitative relationships between dependent and independent variables.	1,2	p(3)=1.0				
		B. Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	1,2					
		D. Apply and extend previous understandings of numbers to the system of rational numbers.	1,2	p(2)=1.0				
	Supporting Cluster	C. Compute fluently with multi-digit numbers and find common factors and multiples.	1	p(5)=1.0	0	2	1	5/8
		H. Solve real-world and mathematical problems involving area, surface area, and volume.	2					
		I. Develop understanding of statistical variability.	1,2					
		J. Summarize and describe distributions.	1,2					

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
— Minimum # Scored Tasks for CAT: This column describes the minimum number of CAT items each student will receive for each target. For example, in grade 3 mathematics Claim 1 Domain 2 *Represent and interpret data,* p(1)=1.0 indicates that each student will have a 100% probability of receiving at least 1 *Represent and interpret data* CAT item.

Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Minimum Number of Items
				CAT	PT/ECR	SR	CR	
2. Problem Solving & 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2,3	p(3)=1.0	2	0	9	9
		B. Select and use appropriate tools strategically.	1,2					
		C. Interpret results in the context of a situation.	2					
		D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1,2,3					
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2,3		4	0		
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2,3,4					
		C. State logical assumptions being used.	1,2					
		D. Interpret results in the context of a situation.	2,3					
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	3,4					
		F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1,2,3					

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
— Minimum # Scored Tasks for CAT: This column describes the minimum number of CAT items each student will receive for each target. For example, in grade 3 mathematics Claim 1 Domain 2 *Represent and interpret data,* p(1)=1.0 indicates that each student will have a 100% probability of receiving at least 1 *Represent and interpret data* CAT item.

		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3,4					
Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Min/Max Number of Items
				CAT	PT/ECR	SR	CR	
3. Communicating Reasoning	n/a	A. Test propositions or conjectures with specific examples.	2	p(5)=1.0	3	0	8	8
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	3,4					
		C. State logical assumptions being used.	2,3					
		D. Use the technique of breaking an argument into cases.	2,3					
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2,3,4					
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2,3					
		G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	3,4					

— DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
— Minimum # Scored Tasks for CAT: This column describes the minimum number of CAT items each student will receive for each target. For example, in grade 3 mathematics Claim 1 Domain 2 *Represent and interpret data,* p(1)=1.0 indicates that each student will have a 100% probability of receiving at least 1 *Represent and interpret data* CAT item.

Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Min/Max Number of Items
				CAT	PT/ECR	SR	CR	
1. Concepts and Procedures	Priority Cluster	A. Analyze proportional relationships and use them to solve real-world and mathematical problems.	1,2	p(9)=1.0	0	7	4	15/20
		D. Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	1,2					
		B. Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	1,2	p(6)=1.0				
		C. Use properties of operations to generate equivalent expressions.	1					
	Supporting Cluster	E. Draw, construct, and describe geometrical figures and describe the relationship between them.	2,3	p(3)=1.0	0	2	1	5/8
		F. Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	1,2					
		G. Use random sampling to draw inferences about a population.	1,2	p(2)=1.0				
		H. Draw informal comparative inferences about two populations.	1,2					
		I. Investigate chance processes and develop, use, and evaluate probability models.	1,2					

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Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Minimum Number of Items
				CAT	PT/ECR	SR	CR	
2. Problem Solving & 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2,3	p(3)=1.0	2	0	9	9
		B. Select and use appropriate tools strategically.	1,2					
		C. Interpret results in the context of a situation.	2					
		D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1,2,3					
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2,3		4	0		
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2,3,4					
		C. State logical assumptions being used.	1,2					
		D. Interpret results in the context of a situation.	2,3					
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	3,4					
		F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1,2,3					

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		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3,4					
Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Minimum Number of Items
				CAT	PT/ECR	SR	CR	
3. Communicating Reasoning	n/a	A. Test propositions or conjectures with specific examples.	2	p(5)=1.0	3	0	8	8
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	3,4					
		C. State logical assumptions being used.	2,3					
		D. Use the technique of breaking an argument into cases.	2,3					
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2,3,4					
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2,3					
		G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	3,4					

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— Minimum # Scored Tasks for CAT: This column describes the minimum number of CAT items each student will receive for each target. For example, in grade 3 mathematics Claim 1 Domain 2 *Represent and interpret data,* p(1)=1.0 indicates that each student will have a 100% probability of receiving at least 1 *Represent and interpret data* CAT item.

Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Min/Max Number of Items
				CAT	PT/ECR	SR	CR	
1. Concepts and Procedures	Priority Cluster	C. Understand the connections between proportional relationships, lines, and linear equations.	2	p(6)=1.0	0	7	4	15/20
		D. Analyze and solve linear equations and pairs of simultaneous linear equations.	2					
		B. Work with radicals and integer exponents.	1	p(6)=1.0				
		E. Define, evaluate, and compare functions.	1,2					
		G. Understand congruence and similarity using physical models, transparencies, or geometry software.	2					
		F. Use functions to model relationships between quantities.	1,2	p(3)=1.0				
		H. Understand and apply the Pythagorean Theorem.	2					
	Supporting Cluster	A. Know that there are numbers that are not rational, and approximate them by rational numbers.	1	p(5)=1.0	0	2	1	5/8
		I. Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.	2					
		J. Investigate patterns of association in bivariate data.	1,2					

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Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Minimum Number of Items
				CAT	PT/ECR	SR	CR	
2. Problem Solving & 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2,3	p(3)=1.0	2	0	9	9
		B. Select and use appropriate tools strategically.	1,2					
		C. Interpret results in the context of a situation.	2					
		D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1,2,3					
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2,3		4	0		
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2,3,4					
		C. State logical assumptions being used.	1,2					
		D. Interpret results in the context of a situation.	2,3					
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	3,4					
		F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1,2,3					

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		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3,4					
Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Minimum Number of Items
				CAT	PT/ECR	SR	CR	
3. Communicating Reasoning	n/a	A. Test propositions or conjectures with specific examples.	2	p(5)=1.0	3	0	8	8
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	3,4					
		C. State logical assumptions being used.	2,3					
		D. Use the technique of breaking an argument into cases.	2,3					
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2,3,4					
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2,3					
		G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	3,4					

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Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Min/Max Number of Items
				CAT	PT/ECR	SR	CR	
1. Concepts and Procedures	Priority Cluster	D. Interpret the structure of expressions.	1	p(2)=1.0	0	7	4	15/20
		E. Write expressions in equivalent forms to solve problems.	1,2					
		F. Perform arithmetic operations on polynomials.	1	p(1)=1.0				
		G. Create equations that describe numbers or relationships.	1,2	p(5)=1.0				
		H. Understand solving equations as a process of reasoning and explain the reasoning.	1,2					
		I. Solve equations and inequalities in one variable.	1,2					
		J. Represent and solve equations and inequalities graphically.	1,2	p(2)=1.0				
		K. Understand the concept of a function and use function notation.	1	p(1)=1.0				
		L. Interpret functions that arise in applications in terms of a context.	1,2	p(4)=1.0				
		M. Analyze functions using different representations.	1,2,3					
		N. Build a function that models a relationship between two quantities.	1,2					
	Supporting Cluster	O. Prove geometric theorems.	2	p(2)=1.0	0	2	1	5/8
		P. Summarize, represent and interpret data on a single count or measurement variable.	2	p(1)=1.0				
		A. Extend the properties of exponents to rational exponents.	1,2	p(1)=1.0				
		B. Use properties of rational and irrational numbers.	1,2					

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		C. Reason quantitatively and use units to solve problems.	1,2	p(1)=1.0				
Claim	**Content Category**	**Assessment Targets**	**DOK**	**Minimum # Scored Tasks**		**Minimum # Items per Item Type**		**Minimum Number of Items**
				CAT	**PT/ECR**	**SR**	**CR**	
2. Problem Solving & 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2,3	p(3)=1.0	2	0	4	5
		B. Select and use appropriate tools strategically.	1,2					
		C. Interpret results in the context of a situation.	2					
		D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1,2,3					
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2,3	p(2)=1.0	p(4)=1.0	0	2	6
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2,3,4					
		C. State logical assumptions being used.	1,2					
		D. Interpret results in the context of a situation.	2,3					
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	3,4					
		F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1,2,3					

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		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3,4					
Claim	Content Category	Assessment Targets	DOK	Minimum # Scored Tasks		Minimum # Items per Item Type		Minimum Number of Items
				CAT	PT/ECR	SR	CR	
3. Communicating Reasoning	n/a	A. Test propositions or conjectures with specific examples.	2	p(8)=1.0		0	8	8
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	3,4					
		C. State logical assumptions being used.	2,3					
		D. Use the technique of breaking an argument into cases.	2,3					
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2,3,4					
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2,3					
		G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	3,4					

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Comparison of Smarter Balanced Assessment Consortium and ACT College and Career Readiness System

Question/Issue		
K-12 Summative Assessments:	**Smarter Balanced**	**ACT's Aspire**
1. What data, alignment studies, etc., can be provided to document that the assessment is fully aligned to the Common Core State Standards? Information on the test blueprint may be provided as well.	The Smarter Balanced Content Specifications were written by teams of content experts to ensure that the assessment will be fully aligned to the Common Core State Standards. In January 2013, the National Center for Research on Evaluation, Standards, and Student Testing released a preliminary evaluation of the extent to which the Smarter Balanced assessment design will yield results on the more complex critical thinking, writing and research, and problem solving skills called for in the Common Core. • **See http://www.cse.ucla.edu/products/reports.php?action=fetch&id=823. An update to this study will be released in Fall 2013.** • **See attached preliminary blueprint.**	
2. At each grade level and content, what will the assessments measure?	In ELA, at grades 3-8 and 11, students will be assessed in the following: • reading literary and informational text • writing including organization, purpose, focus, elaboration, evidence and use of conventions; • listening • research including ability to interpret and integrate information, evaluate resources, and use evidence. In mathematics, at grade 3 – 8 and 11, students will be assessed in the following: • concepts and procedures • problem solving • modeling and data analysis	

	• communicating reasoning	
3. How will student proficiency be communicated?		
• Scale Score unique to grade level	No	
• Vertical or developmental scale score	Yes	
• Proficiency categories	There are 4 levels of achievement. The Achievement Level Descriptors were developed by k-12 teachers, administrators, and higher education faculty and approved by Governing States.	
• Other		
4. What entity will maintain the security of the test item bank?	Smarter Balanced in collaboration with its member states	
5. Will the cut scores be uniformly established, or will states set individual cut scores for student performance?	The cut scores will be uniformly established and agreed upon by Governing States following field testing.	
6. Will the assessments be vertically aligned to measure individual student progress across grades?	Yes.	
7. Will the assessments contain multiple question types including constructed responses, selected response, etc.?	The summative assessment in Smarter Balanced will include the following questions types: • **Selected-response items** prompt students to select one or more responses for a set of options. • **Technology-enhanced items** take advantage of computer-based administration to assess a deeper understanding of content and skills than would otherwise be possible with traditional item types. Technology-enhanced items capitalize on technology to collect evidence through a non-traditional response type, such as	

	editing text or drawing an object. Selected-response and technology-enhanced items can be scored automatically. • **Constructed-response items** prompt students to produce a text or numerical response in order to collect evidence about their knowledge or understanding of a given assessment target. • **Extended constructed response items** prompt students to produce a more lengthy response in order to collect evidence about their knowledge and understanding of a given assessment target. • **Performance tasks** challenge students to apply their knowledge and skills to respond to complex real-world problems. They can best be described as collections of questions and activities that are coherently connected to a single theme or scenario. These activities are meant to measure capacities such as depth of understanding, writing and research skills, and complex analysis, which cannot be adequately assessed with traditional assessment questions. The performance tasks will be taken on a computer (but will not be computer adaptive) and will take one to two class periods to complete.	
8. Are the tests untimed? If so, on average, how many minutes are students projected to take to complete the summative assessment in:	Yes. The assessments are untimed; however, guidelines and expected timeframes have been developed.	
• English language arts	• Grades 3-5: 4.00 hours (includes 3.5 hours of testing and a .5 hour in class activity) • Grades 6-8: 4 hours (includes 3.5 hours of testing and a .5 hour in class activity) • Grade 11: 4.5 hours (includes 4.0 hours of testing and a .5 hour in class activity)	
• Mathematics	• Grades 3-5: 3.00 hours (includes 2.5 hours of testing and a .5 hour in class activity) • Grades 6-8: 3.5 hours (includes 3.0 hours of testing and a .5 hour in class activity) • Grade 11: 4.0 hours (includes 3.5 hours of testing and a .5 hour in class activity)	

• Writing	Included in English Language Arts	
9. Can the test be administered using technology (***computer administered)***? Is the test **adaptive**? What is the projected window when the assessment will be given? When would the results be provided to schools, teachers, parents, etc.? What are the broadband and computer specifications? Is the test content stored locally or are items transported on-demand through the internet?	Yes Smarter Balanced includes a summative computer adaptive assessment. The summative assessment will be administered within a 12 week window at the end of the academic school year. Results will be provided to schools, teachers, and parents within a few weeks of the assessment. See attached Executive Summary of System Requirements Specifications Items are transported on-demand through the internet.	
10. Does the assessment allow for ***paper and pencil*** administration? If so, what is the projected timeline when the assessment will be given? When would the results be provided to schools, teachers, parents, etc.?	Yes. Paper and pencil administration will be an option for the first three years of operational testing. This assessment will be administered within the Smarter Balanced administration window. States will work with their vendor to provide results to schools, teachers, and parents.	
11. What would be the earliest school year that full implementation of the assessment could take place in SC?	2014 – 2015	

12. Please indicate whether the assessment:		
a. Assesses students with disabilities?	Yes. The platform of the assessment is built upon concepts of universal design. It is anticipated that the final copy of the Accessibility and Accommodations Guidelines created in partnership with all governing states will be adopted during the week of September 9th, 2013. The intension of these guidelines are to provide accessibility to all students while generating results that hold true to the assessed construct and are a fair and accurate estimate of each student's achievement. • **See attached Accessibility and Accommodations Factsheet**	
b. Assesses students who are English language learners?	Yes. It is anticipated that the final copy of Accessibility and Accommodations Guidelines created in partnership with all governing states will be adopted during the week of September 9th, 2013. This document outlines the embedded resources designed to ensure that the assessment results for English language learners hold true to the assessed construct and are a fair and accurate estimate of each student's achievement. • **See attached Accessibility and Accommodations Factsheet**	
13. What is the per pupil cost of the assessment for students assuming that only ELA and mathematics are assessed?	The Smarter Balanced fee for ongoing design, development and maintenance of formative, interim, and summative assessments is $9.55 per student. The state cost for activities not performed by Smarter Balanced (including hosting, administering, and scoring the assessment) has been estimated at $17.75 per student. The total cost of summative, interim, and formative assessments form grades 3-8 & 11 is estimated at $27.30 per student. For states opting to only participate in the summative assessment, the Smarter Balanced fee is $6.20 per student. The cost for state-managed activities is estimated at $16.30 per student, for a total cost of $22.50 per student.	

12. Which districts and schools in SC participated in pilot tests in school year 2012-13?	See attached file	
13. Which districts and schools in SC will participate in the field testing in school year 2013-14?	The list of schools identified to participate in the field test, which is scheduled to be administered between March 18, 2014 – June 6, 2014, will be provided to states by September 13th, 2013. This sample of schools will be selected to represent students at each grade level with respect to • Performance on the last state assessment • Gender • Ethnicity • Disability • English Proficiency status • Socioeconomic status	
Beyond Summative Assessments:	**Smarter Balanced**	**ACT**
What other assessments are available? Please provide a breakdown of the assessment costs per child of these additional supports, assessments, etc. as well as a description noting how these assessments support teaching and learning.	The Smarter Balanced fee for ongoing design, development and maintenance of formative, interim, and summative assessments is $9.55 per student. The state cost for activities not performed by Smarter Balanced (including hosting, administering, and scoring the assessment) has been estimated at $17.75 per student. The total cost of summative, interim, and formative assessments form grades 3-8 & 11 is estimated at $27.30 per student.	
• Formative	Formative assessment tools will be part of a digital library of formative assessment tool, practices, and professional development information being developed by educators from all Smarter Balanced Governing States. This online library provides resources for teachers on how to collect and use information about student success in the acquisition of the Common Core State Standards. These resources will be used by teachers throughout the year to better understand students' learning needs, check for misconceptions, and/or provide evidence of progress towards learning goals.	
• Interim	The interim assessment is a flexible set of test items and performance tasks built to the same specifications as the summative assessment and reported on the same scale.	

	The interim assessment can be administered at locally determined intervals throughout the school year and will support the following testing options: • Non-secure content-cluster assessments that help teachers, students, and parents understand whether students are on track, and identify strengths and limitations in relation to the Common Core State Standards. • A non-secure version of the summative assessment to allow schools and districts to measure student progress during the academic year. • A secure item back to support state-designed end-of-course tests.	
• Classroom	The digital library of formative assessment tools and practices will include resources for classroom-based assessment.	
• End-of-Course	These can be derived from the interim item bank.	
• Other	Additional end of grade summative assessments can be developed for grades 9, 10, and 12. These are optional assessments that require a Smarter Balanced fee of $6.20 per student and an estimated state cost of $16.30 per student for activities that include hosting, administration, and scoring.	

StateID	districtID	DistrictNar	SchoolID	SchoolName	NCESCode	testcompleted	datestarted	datecompleted
SC	SC_502	BAMBERG	SC_502_7	DENMARK-OLAR H	4.5E+11	95	28:41.9	48:22.4
SC	SC_2301	GREENVILL	SC_2301_6	THE LEGACY CHAR	4.5E+11	52	36:32.0	24:17.7
SC	SC_3101	Lee 01	SC_3101_1	Lee Central Middle	4.5E+11	153	20:09.8	50:30.8
SC	SC_629	Barnwell 2	SC_629_8	Williston-Elko Mid	4.5E+11	133	39:10.9	50:45.4
SC	SC_2201	Georgetow	SC_2201_9	Brown's Ferry Elem	4.5E+11	53	47:25.9	03:32.9
SC	SC_201	AIKEN 01	SC_201_60	Midland Valley Pre	4.5E+11	30	59:24.8	50:19.8
SC	SC_701	BEAUFORT	SC_701_2	BEAUFORT HIGH S	4.5E+11	255	04:29.3	24:56.3
SC	SC_1001	CHARLEST	SC_1001_8	GARRETT ACADEM	4.5E+11	321	06:29.3	29:21.2
SC	SC_2301	GREENVILL	SC_2301_5	CAROLINA HIGH SC	4.5E+11	249	11:46.3	24:53.2
SC	SC_3501	Marlboro (	SC_3501_2	Wallace Elementar	4.5E+11	76	21:54.2	36:14.1
SC	SC_619	BARNWELL	SC_619_1	BLACKVILLE HILDA	4.5E+11	74	16:58.6	30:01.6
SC	SC_2301	GREENVILL	SC_2301_2	BEREA HIGH SCHO	4.5E+11	155	59:13.6	18:08.6
SC	SC_201	AIKEN 01	SC_201_8	Langley-Bath-Clear	4.5E+11	340	38:01.1	58:37.5
SC	SC_2601	Horry Cour	SC_2601_2	Daisy Elementary	4.5E+11	137	54:50.9	26:34.2
SC	SC_201	AIKEN 01	SC_201_30	Greendale Element	4.5E+11	49	31:31.0	36:58.1
SC	SC_201	AIKEN 01	SC_201_39	North Augusta Ele	4.5E+11	184	13:40.1	48:12.8
SC	SC_4603	York 03	SC_4603_1	Castle Heights Mid	4.5E+11	146	46:23.1	11:32.7
SC	SC_801	BERKELEY (	SC_801_20	J. K. Gourdin Eleme	4.5E+11	47	30:09.1	05:05.0
SC	SC_3701	OCONEE 0	SC_3701_2	Oakway Intermedi	4.5E+11	86	17:24.4	57:10.7
SC	SC_3205	Lexington (	SC_3205_5	River Springs Elem	4.5E+11	113	35:16.6	02:58.3
SC	SC_402	ANDERSON	SC_402_12	BELTON-HONEA PA	4.5E+11	356	30:02.9	02:52.2
SC	SC_1201	CHESTER 0	SC_1201_4	Chester Middle	4.5E+11	159	22:10.7	26:03.4
SC	SC_701	BEAUFORT	SC_701_5	Robert Smalls Mid	4.5E+11	109	49:08.3	04:47.8
SC	SC_1201	CHESTER 0	SC_1201_6	Academy for Teach	4.5E+11	41	30:17.9	56:09.2
SC	SC_3701	OCONEE 0	SC_3701_2	Seneca Middle	4.5E+11	221	42:48.1	20:00.1
SC	SC_2901	Lancaster (	SC_2901_1	Heath Springs Elem	4.5E+11	125	15:51.5	41:59.2
SC	SC_4001	RICHLAND	SC_4001_4	Logan Elementary	4.5E+11	27	07:35.4	00:04.1
SC	SC_201	AIKEN 01	SC_201_28	Schofield Middle	4.5E+11	185	01:19.3	17:21.1
SC	SC_401	Anderson (	SC_401_9	West Pelzer Eleme	4.5E+11	60	36:47.2	38:13.5
SC	SC_2601	Horry Cour	SC_2601_6	Palmetto Academy	4.5E+11	32	53:06.9	26:15.3
SC	SC_4604	York 04	SC_4604_4	Gold Hill Middle	4.5E+11	375	54:29.7	19:24.4
SC	SC_4601	YORK 01	SC_4601_3	YORK COMPREHEN	4.5E+11	484	56:36.0	20:28.4
SC	SC_4001	RICHLAND	SC_4001_5	EAU CLAIRE HIGH S	4.5E+11	9	14:47.4	39:47.1
SC	SC_3202	Lexington (	SC_3202_1	Cyril B. Busbee Cre	4.5E+11	94	45:06.0	10:23.2
SC	SC_3805	Orangebur	SC_3805_3	Marshall Elementa	4.5E+11	119	01:22.0	49:53.6
SC	SC_4207	Spartanbu	SC_4207_7	Cleveland Element	4.5E+11	122	54:26.8	06:59.4
SC	SC_3203	Lexington (	SC_3203_2	Batesburg-Leesville	4.5E+11	75	59:25.6	10:16.4
SC	SC_4501	Williamsbu	SC_4501_2	Williamsburg Coun	4.5E+11	21	12:59.7	54:37.4
SC	SC_201	AIKEN 01	SC_201_5	Jefferson Elementa	4.5E+11	132	13:33.8	03:16.8
SC	SC_201	AIKEN 01	SC_201_16	Aiken Elementary	4.5E+11	233	50:25.5	43:54.4
SC	SC_404	Anderson (	SC_404_31	La France Element	4.5E+11	93	39:54.4	52:31.0
SC	SC_1001	CHARLEST	SC_1001_3	Fort Johnson Midd	4.5E+11	166	53:47.3	14:27.3
SC	SC_4202	Spartanbu	SC_4202_8	Oakland Elementa	4.5E+11	237	08:37.7	27:49.4
SC	SC_801	BERKELEY (	SC_801_1	STRATFORD HIGH S	4.5E+11	269	45:15.9	27:12.1
SC	SC_201	AIKEN 01	SC_201_15	WAGENER-SALLEY	4.5E+11	106	26:10.9	56:06.0
SC	SC_4206	Spartanbu	SC_4206_6	Jesse S. Bobo Elem	4.5E+11	71	33:08.7	49:06.0
SC	SC_3410	Marion 10	SC_3410_2	Britton's Neck Elen	4.5E+11	41	29:12.7	45:39.5
SC	SC_3202	Lexington (	SC_3202_1	Brookland Cayce N	4.5E+11	111	13:14.5	03:21.4

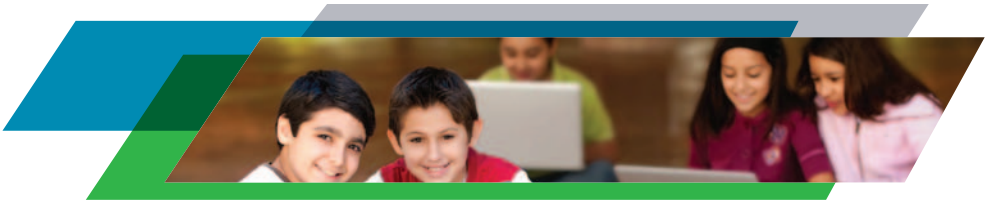
SC	SC_4501	Williamsbu	SC_4501_6	Youth Academy Ch	4.5E+11	6	37:18.5	37:01.8
SC	SC_4203	Spartanbu	SC_4203_3	Cowpens Elementa	4.5E+11	54	46:11.6	43:40.5
SC	SC_1802	Dorchester	SC_1802_2	Gregg Middle	4.5E+11	294	09:51.6	54:20.5
SC	SC_2901	Lancaster (	SC_2901_2	McDonald Green E	4.5E+11	76	18:07.5	02:44.8
SC	SC_4201	Spartanbu	SC_4201_1	New Prospect Elem	4.5E+11	96	34:05.6	00:31.7
SC	SC_2450	GREENWO	SC_2450_2	GREENWOOD HIGH	4.5E+11	418	49:57.4	44:38.2
SC	SC_3601	Newberry (	SC_3601_2	Newberry Middle	4.5E+11	421	03:58.4	59:17.6
SC	SC_801	BERKELEY (	SC_801_29	St. Stephen Middle	4.5E+11	164	45:42.3	18:09.4
SC	SC_1704	Dillon 04	SC_1704_1	Stewart Heights El	4.5E+11	82	45:47.2	12:29.1
SC	SC_4301	Sumter	SC_4301_4	Kingsbury Road Ele	4.5E+11	109	44:12.2	23:41.7
SC	SC_201	AIKEN 01	SC_201_29	Gloverville Elemen	4.5E+11	102	31:12.1	35:07.5
SC	SC_2901	Lancaster (	SC_2901_2	Kershaw Elementa	4.5E+11	133	06:44.2	45:13.2
SC	SC_2601	Horry Cou	SC_2601_5	Palmetto Bays Eler	4.5E+11	143	28:58.8	30:15.1
SC	SC_2801	Kershaw 0	SC_2801_1	Camden Middle	4.5E+11	429	23:42.7	10:59.0
SC	SC_4202	Spartanbu	SC_4202_1	Cooley Springs-Fin	4.5E+11	47	16:09.9	19:34.6
SC	SC_2301	GREENVILL	SC_2301_1	Blue Ridge Middle	4.5E+11	414	50:40.9	02:52.6
SC	SC_3202	Lexington (	SC_3202_1	R. H. Fulmer Middl	4.5E+11	170	35:16.1	20:47.1
SC	SC_3205	Lexington (	SC_3205_5	Chapin Middle	4.5E+11	357	37:20.1	53:07.3
SC	SC_301	Allendale (	SC_301_4	Allendale Elementa	4.5E+11	140	23:41.9	33:11.5
SC	SC_301	Allendale (	SC_301_8	Allendale-Fairfax M	4.5E+11	130	00:30.5	36:51.6
SC	SC_2104	Florence 0	SC_2104_4	Johnson Middle	4.5E+11	89	36:29.4	18:07.5
SC	SC_2301	GREENVILL	SC_2301_6	LEAD Academy Cha	4.5E+11	35	25:10.4	59:37.6
SC	SC_201	AIKEN 01	SC_201_54	Oakwood-Windsor	4.5E+11	58	19:29.9	09:15.5
SC	SC_2601	HORRY 01	SC_2601_1	AYNOR HIGH SCHC	4.5E+11	121	46:32.5	47:37.6
SC	SC_2601	Horry Cou	SC_2601_1	AYNOR HIGH SCHC	4.5E+11	111	46:32.5	47:37.6
SC	SC_3101	Lee 01	SC_3101_1	Lower Lee Element	4.5E+11	58	50:23.7	43:42.3
SC	SC_2101	Florence 0	SC_2101_1	Theodore Lester El	4.5E+11	69	56:58.9	57:14.0
SC	SC_2301	GREENVILL	SC_2301_8	Summit Drive Elem	4.5E+11	118	12:34.2	52:18.7
SC	SC_201	AIKEN 01	SC_201_56	Chukker Creek Eler	4.5E+11	217	31:24.3	08:47.6
SC	SC_701	BEAUFORT	SC_701_28	Beaufort Middle	4.5E+11	369	50:48.1	23:31.1
SC	SC_401	Anderson (	SC_401_61	Powdersville Midd	4.5E+11	344	22:45.3	06:07.2
SC	SC_801	BERKELEY (	SC_801_21	Hanahan Middle	4.5E+11	176	35:13.9	43:07.0
SC	SC_4302	Sumter 02	SC_4302_3	Furman Middle	4.5E+11	512	36:08.1	41:22.9
SC	SC_2101	Florence 0	SC_2101_1	North Vista Elemer	4.5E+11	130	44:53.4	26:57.4
SC	SC_403	Anderson (	SC_403_26	Starr Elementary	4.5E+11	106	34:44.9	17:08.7
SC	SC_4301	Sumter	SC_4301_4	Hillcrest Middle	4.5E+11	225	52:37.5	18:27.4
SC	SC_2301	GREENVILL	SC_2301_5	East North Street A	4.5E+11	70	05:30.6	45:21.6
SC	SC_2301	GREENVILL	SC_2301_7	Northwood Middle	4.5E+11	251	48:22.6	10:52.6
SC	SC_2601	Horry Cou	SC_2601_2	Green Sea Floyds E	4.5E+11	170	16:08.9	19:17.5
SC	SC_4301	Sumter	SC_4301_2	Alice Drive Middle	4.5E+11	323	26:33.1	42:04.6
SC	SC_1001	CHARLEST	SC_1001_6	Charleston Develo	4.5E+11	34	59:37.7	06:42.4
SC	SC_3901	Pickens 01	SC_3901_2	Liberty Elementary	4.5E+11	72	30:38.4	09:17.2
SC	SC_2601	Horry Cou	SC_2601_4	Carolina Forest Ele	4.5E+11	246	38:11.7	20:22.3
SC	SC_4205	SPARTANB	SC_4205_4	JAMES F BYRNES H	4.5E+11	209	27:34.9	53:37.1
SC	SC_3202	Lexington (	SC_3202_2	Pine Ridge Middle	4.5E+11	267	48:13.4	41:23.6
SC	SC_4501	Williamsbu	SC_4501_7	Kingstree Junior Hi	4.5E+11	110	01:58.5	56:31.6
SC	SC_3804	Orangebur	SC_3804_4	Branchville-Locket	4.5E+11	40	29:15.2	20:50.9
SC	SC_201	AIKEN 01	SC_201_60	AIKEN PERFORMIN	4.5E+11	26	27:19.3	06:41.5
SC	SC_1101	CHEROKEE	SC_1101_1	B. D. Lee Elementa	4.5E+11	80	46:45.4	31:06.2

SC	SC_1001	CHARLEST(	SC_1001_8	Stono Park Elemen	4.5E+11	76	49:22.2	11:17.2
SC	SC_1802	Dorchester	SC_1802_1	Alston Middle	4.5E+11	529	59:44.5	32:18.9
SC	SC_1101	CHEROKEE	SC_1101_2	Northwest Elemen	4.5E+11	72	10:54.3	11:58.0
SC	SC_3205	Lexington (	SC_3205_4	Dutch Fork Elemen	4.5E+11	94	35:52.4	30:44.8
SC	SC_2801	Kershaw 0:	SC_2801_1	Camden Elementa	4.5E+11	182	20:02.4	24:00.4
SC	SC_701	BEAUFORT	SC_701_25	Coosa Elementary	4.5E+11	158	53:56.4	13:14.5
SC	SC_4604	York 04	SC_4604_4	Gold Hill Elementa	4.5E+11	271	19:03.9	59:02.6
SC	SC_2450	GREENWO	SC_2450_1	Woodfields Elemer	4.5E+11	148	38:31.1	48:42.0
SC	SC_4602	Clover Sch	SC_4602_1	Oakridge Middle S	4.5E+11	215	39:43.3	51:14.2
SC	SC_801	BERKELEY (	SC_801_14	Boulder Bluff Elem	4.5E+11	211	28:33.5	27:24.0
SC	SC_1001	CHARLEST(	SC_1001_1	Lincoln High	4.5E+11	8	27:42.8	52:16.8
SC	SC_2450	GREENWO	SC_2450_1	Mathews Elementa	4.5E+11	97	39:13.9	45:32.1
SC	SC_3201	Lexington !	SC_3201_5	Saxe Gotha Elemer	4.5E+11	192	57:03.7	11:37.4
SC	SC_3202	Lexington (	SC_3202_2	Saluda River Acade	4.5E+11	113	30:55.0	14:12.9
SC	SC_2901	Lancaster (	SC_2901_2	Indian Land Eleme	4.5E+11	358	12:40.0	47:35.2
SC	SC_402	ANDERSON	SC_402_14	Belton Middle	4.5E+11	170	31:40.7	40:05.6
SC	SC_404	Anderson (	SC_404_37	Mt. Lebanon Elem	4.5E+11	119	12:54.4	20:42.2
SC	SC_201	AIKEN 01	SC_201_22	J. D. Lever Element	4.5E+11	152	04:00.7	11:12.7
SC	SC_3055	Laurens 55	SC_3055_1	E. B. Morse Elemer	4.5E+11	81	45:59.5	34:58.6
SC	SC_701	BEAUFORT	SC_701_1	Lady's Island Midd	4.5E+11	213	02:25.1	37:13.0
SC	SC_4202	Spartanbu	SC_4202_2	Mayo Elementary	4.5E+11	97	32:55.5	28:50.5
SC	SC_1901	Edgefield (	SC_1901_1	Merriwether Midd	4.5E+11	237	29:54.0	15:52.9
SC	SC_4205	SPARTANB	SC_4205_9	Lyman Elementary	4.5E+11	189	06:23.9	01:48.9
SC	SC_402	ANDERSON	SC_402_21	Wright Elementary	4.5E+11	51	00:54.5	09:49.6
SC	SC_2301	GREENVILL	SC_2301_8	Stone Academy	4.5E+11	170	43:47.8	16:54.4
SC	SC_501	BAMBERG	SC_501_5	Richard Carroll Ele	4.5E+11	103	32:28.0	52:33.5
SC	SC_2450	GREENWO	SC_2450_1	Pinecrest Elementa	4.5E+11	74	41:39.1	32:42.7
SC	SC_2601	Horry Cour	SC_2601_1	Conway Middle Scl	4.5E+11	354	39:19.7	21:40.2
SC	SC_501	BAMBERG	SC_501_1	BAMBERG-EHRHAF	4.5E+11	151	29:55.3	30:09.6
SC	SC_201	AIKEN 01	SC_201_38	North Aiken Eleme	4.5E+11	126	35:29.4	07:12.6
SC	SC_201	AIKEN 01	SC_201_9	Leavelle McCampb	4.5E+11	145	42:06.2	26:34.2
SC	SC_201	AIKEN 01	SC_201_35	Millbrook Element	4.5E+11	75	30:08.8	18:00.5
SC	SC_2301	GREENVILL	SC_2301_2	Gateway Elementa	4.5E+11	172	46:50.0	20:12.8
SC	SC_4301	Sumter	SC_4301_1	High Hills Elementa	4.5E+11	142	20:43.5	01:03.9
SC	SC_1001	CHARLEST(	SC_1001_1	James Island Eleme	4.5E+11	141	31:10.0	05:10.3
SC	SC_3205	Lexington (	SC_3205_5	Ballentine Element	4.5E+11	239	22:17.3	56:56.7
SC	SC_2601	Horry Cour	SC_2601_2	Kingston Elementa	4.5E+11	176	07:09.1	03:37.8
SC	SC_4302	Sumter 02	SC_4302_4	Pocalla Springs Ele	4.5E+11	229	25:27.8	23:40.3
SC	SC_2201	Georgetow	SC_2201_1	McDonald Element	4.5E+11	138	12:21.7	04:04.8
SC	SC_1101	CHEROKEE	SC_1101_1	BLACKSBURG HIGH	4.5E+11	156	23:59.3	56:11.3
SC	SC_301	Allendale (	SC_301_6	Fairfax Elementary	4.5E+11	66	29:11.8	57:27.3
SC	SC_2450	GREENWO	SC_2450_8	Oakland Elementa	4.5E+11	139	24:21.9	02:38.1
SC	SC_201	AIKEN 01	SC_201_33	Jackson Middle	4.5E+11	179	19:52.8	02:26.1
SC	SC_2601	Horry Cour	SC_2601_6	Green Sea Floyds H	4.5E+11	40	35:15.0	03:28.0
SC	SC_201	AIKEN 01	SC_201_25	Busbee Corbett Ele	4.5E+11	107	51:13.1	11:17.2
SC	SC_2301	GREENVILL	SC_2301_1	Ellen Woodside Ele	4.5E+11	180	46:46.5	47:50.6
SC	SC_4301	Sumter	SC_4301_2	Alice Drive Elemen	4.5E+11	89	26:59.7	03:05.5
SC	SC_801	BERKELEY (	SC_801_37	Macedonia Middle	4.5E+11	109	04:32.1	35:25.3
SC	SC_3901	Pickens 01	SC_3901_2	Holly Springs Elem	4.5E+11	65	36:23.7	43:59.9

SC	SC_3201	Lexington !	SC_3201_6	Pleasant Hill Eleme	4.5E+11	273	58:53.1	18:51.0
SC	SC_4602	Clover Sch	SC_4602_1	Larne Elementary !	4.5E+11	124	22:04.6	19:58.5
SC	SC_4602	Clover Sch	SC_4602_4	Griggs Road Eleme	4.5E+11	106	19:17.1	26:23.5
SC	SC_4602	Clover Sch	SC_4602_5	Crowders Creek El	4.5E+11	229	21:26.8	08:46.2
SC	SC_2450	GREENWO	SC_2450_1	Merrywood Eleme	4.5E+11	79	21:25.4	59:59.0
SC	SC_2450	GREENWO	SC_2450_1	Brewer Middle Sch	4.5E+11	219	33:10.5	51:18.6
SC	SC_2450	GREENWO	SC_2450_9	Lakeview Elementa	4.5E+11	82	21:13.9	26:48.0
SC	SC_2601	Horry Cour	SC_2601_2	Lakewood Element	4.5E+11	38	35:16.2	10:28.4
SC	SC_4602	Clover Sch	SC_4602_1	Clover High School	4.5E+11	432	40:34.5	00:40.6
SC	SC_4604	York 04	SC_4604_5	Sugar Creek Eleme	4.5E+11	61	24:18.6	53:51.7
SC	SC_3201	Lexington	SC_3201_9	Oak Grove Elemen	4.5E+11	89	18:22.6	06:58.4
SC	SC_801	BERKELEY	SC_801_27	Sedgefield Middle	4.5E+11	619	24:55.6	02:13.3
SC	SC_2450	GREENWO	SC_2450_1	Hodges Elementar	4.5E+11	91	51:26.8	43:38.8
SC	SC_2450	GREENWO	SC_2450_3	Northside Middle !	4.5E+11	229	11:25.6	10:13.8
SC	SC_2201	Georgetow	SC_2201_1	Pleasant Hill Eleme	4.5E+11	141	35:53.5	53:09.0
SC	SC_3201	Lexington	SC_3201_5	Midway Elementar	4.5E+11	359	05:06.6	34:01.1
SC	SC_3402	Marion 02	SC_3402_1	McCormick Elemer	4.5E+11	85	10:26.3	18:28.0
SC	SC_2201	Georgetow	SC_2201_2	Plantersville Eleme	4.5E+11	45	06:18.0	39:04.9
SC	SC_3201	Lexington	SC_3201_4	White Knoll Eleme	4.5E+11	317	00:32.9	56:44.2
SC	SC_3201	Lexington	SC_3201_6	Carolina Springs El	4.5E+11	435	59:52.4	33:16.2
SC	SC_501	BAMBERG	SC_501_2	Bamberg-Ehrhardt	4.5E+11	191	30:43.5	32:03.0
SC	SC_4602	Clover Sch	SC_4602_1	Bethany Elementa	4.5E+11	168	09:57.3	56:30.0
SC	SC_4604	York 04	SC_4604_4	Fort Mill Elementa	4.5E+11	125	12:49.3	03:33.8
SC	SC_1901	Edgefield (	SC_1901_3	Douglas Elementar	4.5E+11	36	54:46.2	25:12.6
SC	SC_4301	Sumter	SC_4301_2	Crosswell Drive Ele	4.5E+11	151	40:56.0	17:08.5
SC	SC_2201	Georgetow	SC_2201_8	Andrews Elementa	4.5E+11	99	50:57.4	00:49.0
SC	SC_2601	HORRY 01	SC_2601_2	Loris Middle	4.5E+11	170	55:46.2	55:03.4
SC	SC_402	ANDERSON	SC_402_19	Honea Path Middle	4.5E+11	186	53:10.9	37:00.4
SC	SC_3901	Pickens 01	SC_3901_1	Crosswell Elementa	4.5E+11	73	30:14.4	44:35.5
SC	SC_3804	Orangebur	SC_3804_5	Lockett Elementary	4.5E+11	42	28:13.0	10:22.5
SC	SC_2601	Horry Cour	SC_2601_3	North Myrtle Beac	4.5E+11	305	39:16.4	23:11.3
SC	SC_201	AIKEN 01	SC_201_57	Aiken Middle	4.5E+11	191	41:07.1	39:50.2
SC	SC_2601	Horry Cour	SC_2601_8	LORIS HIGH SCHOC	4.5E+11	185	56:58.1	10:50.4
SC	SC_1001	CHARLEST(	SC_1001_4	Mary Ford Elemen	4.5E+11	31	14:54.9	11:51.6
SC	SC_1101	CHEROKEE	SC_1101_2	Limestone-Central	4.5E+11	73	43:51.0	06:09.0
SC	SC_2201	Georgetow	SC_2201_2	Waccamaw Eleme	4.5E+11	141	38:10.8	57:39.5
SC	SC_4602	Clover Sch	SC_4602_1	Clover Middle Scho	4.5E+11	327	48:30.5	12:45.3
SC	SC_4604	York 04	SC_4604_5	Pleasant Knoll Elen	4.5E+11	58	26:02.5	02:31.5
SC	SC_2105	Florence 0!	SC_2105_4	Johnsonville Middl	4.5E+11	102	35:27.1	11:27.8
SC	SC_2201	Georgetow	SC_2201_2	Carvers Bay Middle	4.5E+11	293	05:01.1	42:57.0
SC	SC_4602	Clover Sch	SC_4602_1	Bethel Elementary	4.5E+11	86	04:21.9	39:39.9
SC	SC_4604	York 04	SC_4604_3	Fort Mill Middle Sc	4.5E+11	187	40:51.4	14:54.0
SC	SC_3601	Newberry	SC_3601_8	Gallman Elementa	4.5E+11	128	36:17.2	16:16.3
SC	SC_4301	Sumter	SC_4301_8	Cherryvale Elemen	4.5E+11	93	42:52.8	48:05.1
SC	SC_401	Anderson (	SC_401_14	Hunt Meadows Ele	4.5E+11	57	24:58.9	17:18.2
SC	SC_2601	Horry Cour	SC_2601_3	Midland Elementa	4.5E+11	65	59:14.3	48:40.1
SC	SC_3701	OCONEE 0	SC_3701_3	TAMASSEE-SALEM	4.5E+11	37	48:11.5	57:22.2
SC	SC_1601	Darlington	SC_1601_1	Spaulding Middle	4.5E+11	75	27:21.6	14:07.0
SC	SC_201	AIKEN 01	SC_201_60	Lloyd-Kennedy Cha	4.5E+11	33	44:33.7	07:21.5

SC	SC_2301	GREENVILL	SC_2301_9	Tigerville Elementa	4.5E+11	77	17:33.5	07:39.9
SC	SC_2601	HORRY 01	SC_2601_1	Myrtle Beach Midc	4.5E+11	219	38:25.5	03:56.5
SC	SC_4001	RICHLAND	SC_4001_5	Rosewood Elemen	4.5E+11	20	15:33.1	35:37.8
SC	SC_3205	Lexington (	SC_3205_4	Irmo Middle	4.5E+11	395	50:38.2	10:17.4
SC	SC_401	Anderson (	SC_401_13	Wren Elementary	4.5E+11	103	00:30.8	11:35.5
SC	SC_2103	Florence 0	SC_2103_3	Olanta Elementary	4.5E+11	71	46:58.1	55:03.2
SC	SC_4602	Clover Sch	SC_4602_1	Kinard Elementary	4.5E+11	53	09:11.4	36:22.7
SC	SC_4604	York 04	SC_4604_5	Orchard Park Elem	4.5E+11	120	16:14.8	51:33.4
SC	SC_2450	GREENWO	SC_2450_2	Springfield Elemen	4.5E+11	100	27:38.0	32:14.7
SC	SC_2450	GREENWO	SC_2450_2	Westview Middle S	4.5E+11	217	10:28.6	33:58.3

Smarter Balanced Assessment Consortium



Smarter Balanced Accessibility and Accommodations: Meeting the Needs of All Students

Smarter Balanced is a state-led consortium creating next-generation student assessments that will be available in the 2014-15 school year. Accessibility is a core principle of the design process. The Smarter Balanced assessment system will provide accurate measures of achievement and growth for students with disabilities and English language learners. The assessments will address visual, auditory, and physical access barriers—allowing virtually all students to demonstrate what they know and can do.

Key Features of Smarter Balanced

- **Includes tools that will improve accessibility for all students, while also supporting accommodations to meet the needs of students with disabilities and English language learners.**
- **Optional interim assessments provide information about student progress throughout the year to help teachers differentiate instruction.**
- **Measures student achievement and growth in English language arts/literacy and mathematics in grades 3-8 and 11.**

Designed for All Students

The Smarter Balanced assessment system uses technology to deliver assessments that fit the needs of individual students. Items and tasks will be associated with a variety of accessibility tools and accommodations that can be delivered to students automatically based on their profile.

Accessibility tools include, but are not limited to: foreground and background colors; tactile presentation of content (e.g., Braille); and translated presentation of content in signed form and select languages. Online delivery of Smarter Balanced assessments ensures that students can take a test individualized to meet their needs at the same time as their peers.

Developed with Experts

Smarter Balanced is working with educators, students, and experts in the field to design and test the assessment system. In addition to a state-led Accessibility and Accommodations Work Group, the Consortium works with advisory panels on English language learners and students with disabilities to ensure that the assessments are developed using principles of Universal Design and research-based best practices.

In 2012, member states, Smarter Balanced staff, and leading experts contributed to the development of a conceptual framework that will guide the development of common test accessibility and accommodations policies. This model will help ensure that students with special needs receive appropriate supports no matter where they live. In addition, Smarter Balanced is conducting research to better understand how English language learners and students with disabilities respond to computer-based assessment items and performance tasks, as well as accessibility and accommodations tools.

In early 2013, Smarter Balanced will conduct a Pilot Test across Smarter Balanced member states to better understand how students respond to assessment items. In addition, all assessment items and performance tasks will be reviewed for accessibility, style, and bias and sensitivity before being administered to ensure they minimize or eliminate barriers to participation and provide accurate measurement of student ability.

Assessment Implementation Timeline

- 2011-12 school year—Develop accessibility and accommodations policy framework
- 2013-14 school year—Disseminate documents and training materials to support professional learning
- 2014-15 school year—Implementation of assessment system

LEARN MORE AND GET INVOLVED

Visit SmarterBalanced.org to learn more about the Smarter Balanced Assessment Consortium and sign-up to receive our monthly eNewsletter. For more information, please contact Magda Chia (Magda.Chia@SmarterBalanced.org), director of support for under-represented students.

Smarter Balanced Assessment Consortium

The Smarter Balanced Technology Strategy Framework and System Requirements Specifications

EXECUTIVE SUMMARY

Smarter Balanced
Assessment Consortium

The Smarter Balanced Technology Strategy Framework and System Requirements Specifications

This report presents a framework for collective technology planning among the Smarter Balanced Assessment Consortium member states. The plan emphasizes the critical need for technology to support student learning with the Smarter Balanced Assessment System minimum requirements as context and milestones. Key data was acquired and reviewed from a variety of sources including the Technology Readiness Tool and related survey information, state stakeholder discussions, Smarter Balanced advisory meetings and related research, and district interviews from across the Consortium.

Key Findings:

1. States implementing online, computer-adaptive assessments similar to the proposed Smarter Balanced Assessment System have done so effectively while adhering to tight budgetary provisions and implementation timelines.

2. Districts and educators within states that have made the transition to online, computer-adaptive tests find considerable value in the increased amount and specificity of performance data available, the expediency in which the data is accessible, and the cost-savings associated with online distribution and management of the assessment and the related data.

3. Much of the existing hardware devices currently deployed across school sites will effectively support the Smarter Balanced Assessment System; however, districts must focus on ensuring ample bandwidth provisions to support larger populations of students participating in testing through strategic scheduling and rotations throughout administration windows.

This report, as commissioned by the Smarter Balanced Assessment Consortium, provides minimum recommended hardware specifications and basic bandwidth calculations required to successfully administer the Smarter Balanced assessment solution. Districts are urged to review the following tables along with the full document, as well as reference the Smarter Balanced website (http://www.smarterbalanced.org) regularly for up-to-date information. Taken together, these materials, and the approaches contained within them, will help all districts strategically prepare for a full and successful implementation of the Smarter Balanced assessment.

Smarter Balanced Assessment Consortium

Hardware and Software Requirements Overview

Operating System	Minimum Smarter Balanced Requirements for Current Computers[1,2,3]	Recommended Smarter Balanced Minimum for New Purchases
Windows	Windows XP (service pack 3) Pentium 233 MHz processor 128 MB RAM 52 MB hard drive free space	Windows 7+ 1GHz processor 1GB RAM 80 GB hard drive or at least 1GB of hard drive space available
Mac OS X	Mac OS X 10.4.4 Macintosh computer with Intel x86 or PowerPC G3 (300 MHz) processor, 256 MB RAM, 200 MB hard drive free space	Mac OS X 10.7+ 1 GHz processor 1GB RAM 80 GB hard drive or at least 1GB of hard drive space available
Linux	Linux (Ubuntu 9-10, Fedora 6) Pentium II or AMD K6-III 233 MHz processor 64 MB RAM 52 MB hard drive free space	Linux (Ubuntu 11.10, Fedora 16) 1 GHz processor 1GB RAM 80 GB hard drive or at least 1GB of hard drive space available
iOS	iPads 2 running iOS6	iPads 3+ running iOS6
Android	Android-based tablets running Android 4.0+	Android-based tablets running Android 4.0+
Windows	Windows-based tablets running Windows 8+ (excluding Windows RT)	Windows-based tablets running Windows 8+ (excluding Windows RT)
Chrome OS	Chromebooks running Chrome OS (v19)+	Chromebooks running Chrome OS (v19)+

Minimum Computer Requirements

Minimum requirements represent a low compliance threshold. Districts should attempt to exceed these requirements as many machines operating at these levels could struggle with sufficient on-board memory and processing to run secure browsers as well as other simultaneous running programs accumulated on the device over time.

[1] The minimum Smarter Balanced requirements are generally equivalent to the minimum requirements of the associated eligible operating system. Users should refer to the minimum requirements of the operating system as a means of resolving any ambiguities in the minimum Smarter Balanced requirements.

[2] These guidelines do not supersede the minimum requirements of the operating systems.

[3] All hardware choices should consider the individual needs of students. Some students may need hardware that exceeds these minimum guidelines, and some students may require qualitatively different hardware. Tablets may require the use of a mouse.

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The Smarter Balanced Technology Strategy Framework and System Requirements Specifications

Additional Requirements Applicable across Operating Systems:

Device Requirements	Minimum Smarter Balanced Requirements for Current Computers
Screen Size	10'' class or larger 1024 x 768 resolution
Headphones/earphones	Available to students for use during the English language arts test and for students who require text-to-speech features on the mathematics test
Security	The device must have the administrative tools and capabilities to temporarily disable features, functionalities, and applications that could present a security risk during test administration.
Keyboards	Mechanical keyboards must be available unless students use alternative input devices as part of their classroom instruction.
Form Factors	No restriction as long as the device meets the other stated requirements. These forms include desktops, laptops, netbooks, virtual desktops and thin clients[4], tablets (iPad, Windows, Chromebooks, and Android), and hybrid laptop/tablets.
Network	Must connect to the Internet with approximately 10–20 Kbps available per student to be tested simultaneously

Minimum Requirements for Other Devices

Minimum requirements represent a low compliance threshold. Ultimately, districts should attempt to exceed these requirements as many machines operating at these levels could struggle with sufficient on-board memory and processing to run secure browsers as well as other simultaneous running programs accumulated on the device over time.

[4] The resources (e.g., memory and processors) available to each client need to be equivalent or greater to the requirements for standalone hardware.

Additionally, Smarter Balanced anticipates projected dates by which various operating systems will be deemed insufficient support for the Smarter Balanced Assessment System. The table on the next page shows anticipated Smarter Balanced end of support dates for various operating systems in use across districts.

Please refer to the full Smarter Balanced Technology Strategy Framework and Systems Requirements Specifications document on the Smarter Balanced website for a comprehensive reporting of all related information.

http://www.smarterbalanced.org.

The Smarter Balanced Technology Strategy Framework and System Requirements Specifications

Operating System (OS)	OS Release Date	Anticipated Smarter Balanced End of Support Date
Mac 10.4.4	January 2006	Spring 2015[5]
Mac 10.5	October 2007	Spring 2017
Mac 10.6	August 2009	Spring 2019
Mac 10.7 Mac 10.8	July 2011 July 2012	Spring 2021 Spring 2022
Windows XP (SP 3)	October 2008	Spring 2015[5]
Windows Vista	January 2007	Spring 2017
Windows 7 Windows 8	October 2009 October 2012	Spring 2020 Spring 2022
Windows Server 2003	April 2003	Spring 2015
Windows Server 2008	October 2009	Spring 2019
Linux (Fedora Core 6 (K12LTSP 4.2+))	November 2007	Spring 2017[6]
Linux Ubuntu 9-12	October 2009	Spring 2019[6]
iOS 6	June 2012	TBD[6]
Android 4.x	October 2011	TBD[6]
Windows 8	October 2012	TBD
Chrome OS	Rolling Release	TBD[6]

[5] While the entire end of support plan will be reviewed annually with the Architecture Review Board, these particular OS versions will be emphasized and may require more detailed conversations.

[6] This operating system may have a lower cost to update than do traditional operating systems and will be placed on an expedited end of support cycle until the new operating system version becomes incompatible with legacy hardware that is otherwise considered eligible by Smarter Balanced.