Introduction

Student Achievement Partners (SAP) has created some documents to help those creating educational materials and various types of assessments aligned to the Common Core State Standards for Math (CCSSM).

This presentation will discuss three tools:

- Publisher's Criteria in Mathematics
- Draft Interim/Benchmark Assessment rubric
- Draft Quality Criteria Checklist

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Publishers' Criteria in Mathematics

The Publishers' Criteria in Mathematics - Based on the two major evidence-based design principles of the CCSSM, focus and coherence, the document intends to guide the work of publishers and curriculum developers, as well as states and school districts, as they design, evaluate, and select materials or revise existing materials.

This file is being updated with revisions to be posted shortly. In the meantime, the K-8 and HS documents are available on corestandards.org under "Resources"

Publishers' Criteria in Mathematics (continued)

The Publishers' Criteria frame the Standards and communicate the three shifts to a variety of audiences.

National Governors Association · CCSSO Council of Chief State School Officers · Achieve · Council of the Great City Schools · NASBE National Association of State Boards of Education

K–8 Publishers' Criteria for the Common Core State Standards for Mathematics

> These Standards are not intended to be new names for old ways of doing business. They are a call to take the next step. … It is time to recognize that standards are not just promises to our children, but promises we intend to keep.
>
> –CCSSM, p. 5

The Common Core State Standards were developed through a state-led initiative that drew on the expertise of teachers, researchers and content experts from across the country. The Standards define a staircase to college and career readiness, building on the best of previous state standards and evidence from international comparisons and domestic reports and recommendations. Most states have now adopted the Standards to replace previous

Publishers' Criteria in Mathematics (continued)

The Publisher's Criteria also contains a rubric that illustrates required elements of CCSS-aligned materials.

Sample Rubric. (In each case, the top-line criterion is shown. Refer to the additional text to inform judgment on each criterion.)

	Top-Line Criterion	Notes	Evaluation (check one)
1. Focus on Major Work	In any single grade, students and teachers using the materials as designed spend the large majority of their time, approximately three-quarters,[16] on the major work of each grade.		Not Met ☐ Met ☐
2. Focus in Early Grades	Materials do not assess any of the topics in Table 2 before the grade level indicated, or pattern problems in K–5 that do not support the focus on arithmetic, such as "find the next one" problems.		Not Met ☐ Met ☐
3. Focus and Coherence through Supporting Work	Supporting content (where present) does not detract from focus, but rather enhances focus and coherence simultaneously by engaging students in the major work of the grade.		Not Met ☐ Met ☐
4. Rigor and Balance Materials and tools reflect the balances in the	Developing students' conceptual understanding of key mathematical concepts, where called for in specific content standards or cluster headings.		Not Met ☐ Met ☐

Draft CCSS Rubric for Interim/Benchmark Assessments Structure

Section 1: Non-Negotiables

The draft rubric lists six "Non-Negotiables." These are criteria that every set of mathematics assessments must meet to be considered aligned. Reviewers of existing or potential interim/benchmark assessments can use this document to evaluate how well the assessments align with the requirements of the CCSS.

Six Non-Negotiables

1. **Focus on Major Work**
2. **Focus in K-8**
3. **Alignment to the CCSSM**
4. **Rigor and Balance**
5. **Practice-Content Connections**
6. **Assess College and Career Readiness**

If the assessments do not meet each of these criteria, they should be considered non-aligned.

NON-NEGOTIABLE 1. Focus on the Major Work.

In every covered grade/course, the set of interim/benchmark assessments devote at least:

- 85% of the total points in K-2 exclusively to the major work of the grade;
- 75% of the total points in grades 3-5 exclusively to the major work of the grade;
- 70% of the total points in grades 6-8 exclusively to the major work of the grade
- 50% of the points in high school to widely applicable prerequisites for postsecondary work.

Use the test blueprints for the assessments and the Sample Worksheet provided in the draft rubric to verify that the percentage for every tested grade/course meets the minimum for the applicable grade band.

To be aligned to the CCSSM, the percentage of points aligned to the Major Clusters must meet or exceed the given percentage for each grade/course.

For additional information, refer to criterion #1 in the K-8 Publishers' Criteria for Mathematics.

If the assessments do not meet each of these criteria, they should be considered non-aligned.

NON-NEGOTIABLE 2. Focus in K-8.

No item on an assessment or within the item banks requires knowledge of specified topics before the grade level indicated in the CCSSM.

To be aligned to the CCSSM, the interim/benchmark assessments cannot assess certain topics before they are introduced in the CCCSSM.

For additional information, refer to criterion #2 in the K-8 Publishers' Criteria for Mathematics

NON-NEGOTIABLE 2. Sample Worksheet.

Topic	No Knowledge Required before this grade-level	Mark True or False	Evidence
Symmetry of shapes, including line/reflection symmetry, rotational symmetry.	**4**	**T F**	
Statistical distributions, including center, variation, clumping, outliers, mean, median, mode, range, quartiles; and **statistical association or trends**, including two-way tables, bivariate measurement data, scatter plots, trend line, line of best fit, correlation.	**6**	**T F**	
Probability, including chance, likely outcomes, probability models.	**7**	**T F**	
Similarity, congruence, or geometric transformations.	**8**	**T F**	

If the assessments do not meet each of these criteria, they should be considered non-aligned.

NON-NEGOTIABLE 3. Alignment to the CCSSM.

The items are designed to elicit direct, observable evidence of the degree to which a student can independently demonstrate the targeted standard. Items should exhibit alignment to the letter and spirit of the CCSSM.

Developers of assessments can annotate a subset of items to describe how items are aligned, or a state/district may organize their own review process to evaluate the interim/benchmark assessments using these Sample Worksheets.

To be aligned to the CCSSM, all items must be aligned to the CCSSM.

If the assessments do not meet each of these criteria, they should be considered non-aligned.

NON-NEGOTIABLE 4: Rigor and Balance.

Test blueprints or CAT item pools reflect the balances in the Standards and help students meet the Standards' rigorous expectations.

The Sample Worksheet for #4 requires the developer to produce or the reviewer to calculate the percentage of items that meet each description. Then assess whether there is balance in the attention to rigor.

To be aligned to the CCSSM, each grade/course must have items that assess each element of rigor and those items must represent the balance reflected in the Standards.

For additional information, refer to criterion #4 in the K-8 Mathematics Publishers' Criteria

If the assessments do not meet each of these criteria, they should be considered non-aligned.

NON-NEGOTIABLE 5. Practice-Content Connections.

The assessments include items that connect practice standards and content standards.

The developer of the assessment will provide alignment information describing the approach for each practice standard in relation to the content within each grade/course.

To be aligned to the CCSSM, there must be items that connect the practice standards and content standards and the developer must provide a narrative that describes how the two sets of standards are meaningfully connected within the set of assessments for each grade.

If the assessments do not meet each of these criteria, they should be considered non-aligned.

NON-NEGOTIABLE 6. Assess College and Career Readiness.

The Standards are organized so that students will be ready for college and career paths. A well-designed set of Interim/Benchmark assessments will support this through focused test blueprints as well as instructionally actionable and usable information.

To be aligned to the CCSSM, the set of assessments much provide information about student growth toward college and career readiness that is actionable and easy to use.

Draft CCSS Rubric for Interim/Benchmark Assessments Structure

Section 2: Preferred Criteria

If a set of assessments satisfies the first six criteria, the draft rubric contains a second section that allow users to further evaluate and compare assessments.

These additional criteria include:

- Recommendations about minimum requirements to balance the three elements of rigor.
- Grade band requirements for alignment to the content standards.
- Points of emphasis when addressing to the Standards for Mathematical Practices.
- Form construction indicators of quality.

A High-Level Summary of the Draft Quality Criteria

STEP 1: Solve the problem.

STEP 2: Evaluate the task using the following criteria.

FIRST GATE
1. A Alignment
1. B Correctness
1. C Rationales and/or Top-Score Response

SECOND GATE
2. A Linguistic Clarity
2. B Technical Quality
2. C Accessibility
2. D Technology
2. E Complexity
2. F Context Quality
2. G Stimuli
2. H Rubric

- If the task meets all of the First Gate criteria (possibly with revision), then move to the criteria in the Second Gate.
- If the task does not pass the First Gate, reject the task and move to the next task.

Draft Quality Criteria

STEP 1: Solve the problem.
STEP 2: Evaluate the task using the following criteria, organized into two “gates”

Criteria for Evaluating Items for Common Core State Standards Assessments	
☐ **Reviewer has solved the problem**	
FIRST GATE: The item or task must meet all of the following to be considered further.	
1.A	**Alignment:** Is the item or task directly and accurately aligned to the assessment target and standard(s) indicated, including the mathematical practices listed?
1.B	**Correctness:** Is the item mathematically correct, including at least one appropriate solution and accurate use of mathematical vocabulary and symbols?
1.C	**Rationales and/or Top-Score Response:** For a selected-response item (SR) are high-quality rationales (aligned to the assessment targets and standard(s)) provided for the correct answer and each distractor? For a constructed-response item (CR), is a top-score response provided?

Draft Quality Criteria (continued)

SECOND GATE: Items or tasks that pass the first gate must next meet the following criteria, possibly after revision.	
2.A	**Linguistic Clarity:** Is the item or task written in clear, unambiguous, grade-appropriate language with no construct-irrelevant linguistic complexity e.g., negative phrasings, or complex sentence structures?
2.B	**Technical Quality:** Does the item or task exemplify high standards of technical quality, including the following: • The question precludes guessing (plausible distractors or gridded response; probability of guessing is 10% or less); and • The question does not inadvertently clue a student's response strategy; and • The expectations of student performance are clear?
2.C	**Accessibility:** Is the item or task accessible**,** reflecting UDL principles to maximize accessibility for ELL students and students with disabilities?
2.D	**Technology:** If technology is used, does it provide value beyond that of a non-technology-enhanced item or task: • Technology improves measurement of the construct (e.g., efficiency or other means), rather than functioning for its own sake; and • The instructions for using the technology are clear and can be easily understood and followed in a testing environment; and • The technology accurately represents a counterpart to a real-life use of technology, where applicable?

Draft Quality Criteria (continued)

SECOND GATE: Tasks that pass the first gate must next meet the following criteria, possibly after revision.	
2.E	**Complexity**: Does the task align to the intended complexity required by the evidence statement(s) being assessed, without any needless complexity or difficulty?
2.F	**Context Quality:** When a situational or real-world context is present for the task, is the context logical, convincing and necessary to assess the standard?
2.G	**Stimuli:** When diagrams, pictures, or illustrations are present: • Are they consistent with the indicated evidence statements and clarifications/limits; and • Do they support comprehension or provide mathematical meaning for the task; and • Is the purpose of the stimuli clear?
2.H	**Rubric:** When a rubric is part of the task: • Does it correctly communicate the purpose of the task; and • Does it account for all valid and distinct solution paths that are likely to be developed by students? • Does partial credit correspond to partial fulfillment of the evidence statement at hand?

Additional CCSS-aligned resources available at achievethecore.org

More information on the CCSS and Common Core aligned resources are available at www.achievethecore.org.