TOOLKIT

for Evaluating Alignment of Instructional and Assessment Materials to the Common Core State Standards

March 2014

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INTRODUCTION

TOOLKIT
for Evaluating Alignment of Instructional and Assessment Materials to the Common Core State Standards
I. Introduction

The Common Core State Standards (CCSS) are a set of academic standards in mathematics and English language arts/literacy that are grounded in evidence and designed to ensure that all students have the academic knowledge and skills they need in these core subjects to succeed after high school. The CCSS were developed in a state-led process under the leadership of governors and chief state school officers with participation from 48 states. The process included the involvement of state departments of education, districts, teachers, community leaders, experts in a wide array of fields, and professional educator organizations.

A good place to begin to understand the CCSS is through a study of the standards themselves and the key instructional shifts required in each discipline. In English language arts/literacy, students will be exposed to a balance of literary and informational texts to build a growing base of knowledge and will be expected to cite evidence from within the texts in order to answer questions and develop written or verbal responses. Students will also be expected to develop facility with academic language and read texts that increase in complexity as they progress so that all students are ready for the demands of college- and career-level reading no later than the end of high school. The instructional shifts in English language arts/literacy are as follows:1

- **Building knowledge** through content-rich nonfiction
  - Reading, writing, and speaking grounded in evidence from text, both literary and informational
  - Regular practice with complex text and academic language

Focus and coherence are the two major evidence-based design principles of the Common Core State Standards for Mathematics.2 These principles are meant to fuel greater achievement in a deep and rigorous curriculum, one in which students acquire conceptual understanding, procedural skill and fluency, and the ability to apply mathematics to solve problems. Thus, the instructional shifts in mathematics are as follows:3

- **Focus:** focus strongly where the standards focus
- **Coherence:** think across grades/courses, and link to major topics in each course
- **Rigor:** in major topics, pursue with equal intensity
  - conceptual understanding,
  - procedural skill and fluency, and
  - applications

To ensure that all students are able to meet these high expectations, educators need access to high-quality and well-aligned instructional and assessment materials. In support of the work being done by both educators and developers to meet this need, Achieve, the Council of Chief State School Officers and Student Achievement Partners have developed this Toolkit for Evaluating Alignment of Instructional and Assessment Materials. The purpose of the Toolkit is to catalyze the impact that the CCSS can have on student achievement by increasing the prevalence of CCSS-aligned, high-quality instructional and assessment materials.

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1 For more information about the shifts in English language arts/literacy, see achievethecore.org/elalitshifts
2 For some of the sources of evidence consulted during the standards development process, see pp. 91-93 of CCSSM.
3 For more information about the shifts in mathematics, see achievethecore.org/mathshifts
What’s in the Toolkit?
An Overview
II. What’s in the Toolkit? An Overview

The Toolkit is a set of interrelated, freely available instruments for evaluating instructional and assessment materials for alignment to the CCSS. The tools themselves are included in section III; see Table A for a summary. Each tool in the Toolkit supports the expectations in the CCSS and derives from the Publishers’ Criteria for the Common Core State Standards in English language arts/literacy and mathematics, which were developed by lead authors of the CCSS along with the National Governors Association, Council of Chief State School Officers, Achieve, Council of the Great City Schools and National Association of State Boards of Education. The Publishers’ Criteria provide guidance for both developers and purchasers of curricular materials by defining quality materials aligned to the CCSS. The criteria were revised through conversations with educators, researchers, and other stakeholders to be purposeful and strategic in both what to include and what to exclude in instructional materials based on the CCSS.

The criteria were developed from the perspective that publishers and purchasers are equally responsible for ensuring high-quality instructional materials. They do not define, endorse or prescribe curriculum; those decisions are, and should be, local within each state or district. The instruments in this Toolkit do not express novel expectations, but rather articulations of the Publishers’ Criteria for use in practice. It is therefore highly recommended that the Publishers’ Criteria be read prior to using any of the included resources. The Publishers’ Criteria for the Common Core State Standards can be found in the Appendix to the Toolkit or online at www.core-standards.org/resources or www.achievethecore.org/publisherscriteria.

Educators are encouraged to integrate the Publishers’ Criteria and the tools in the Toolkit into CCSS implementation efforts and to use them to deepen shared understanding and support systematic application of the criteria for CCSS-aligned instructional and assessment materials. In doing this work, it is important to note that the included tools do not address all factors that may be important in determining whether instructional materials and assessments are appropriate in a given local or state context but instead aim to clearly articulate the criteria for alignment to the CCSS.

Successful implementation of the CCSS requires many actors across the educational system to work in concert. Hence, the audience for the Toolkit is intentionally broad, ranging from classroom teachers to state administrators.

Potential Toolkit users include:

• educators and administrators responsible for developing or evaluating curriculum, or for making purchasing decisions for comprehensive textbooks and textbook series in print and digital format;

• educators and administrators responsible for developing, evaluating or making purchasing decisions for grade or course-level assessment materials, including individual or sets of assessments, item banks or individual assessment items; and

• teachers and instructional coaches responsible for creating, or selecting and reviewing, lesson plans and units.
Table A. Types of Tools in the Toolkit

Tools of each type are content specific, and in some cases, grade band specific.

<table>
<thead>
<tr>
<th>Type of Tool</th>
<th>Used for Evaluating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Materials Evaluation Tool (IMET)</td>
<td>Comprehensive mathematics and English language arts or reading curricula in print and digital format.</td>
</tr>
<tr>
<td>EQuIP Rubric for Lessons and Units</td>
<td>Lesson plans and units of instruction in mathematics and English language arts/literacy.</td>
</tr>
<tr>
<td>Assessment Evaluation Tool (AET)</td>
<td>Assessments or sets of assessments and item banks for mathematics and English language arts/literacy, including interim/benchmark assessments, and classroom assessments designed to address a grade or course.</td>
</tr>
<tr>
<td>Assessment Passage &amp; Item Quality Criteria Checklist</td>
<td>Assessment passages and assessment items or tasks.</td>
</tr>
<tr>
<td>EQuIP Student Work Protocol</td>
<td>Student work to establish or articulate the relationship between student work and the quality and alignment of instructional materials.</td>
</tr>
</tbody>
</table>
Overview of the Tools in the Toolkit

Instructional Materials Evaluation Tool (IMET)

For each given subject area and grade band, the Instructional Materials Evaluation Tool (IMET) is used to evaluate a comprehensive textbook or textbook series for alignment to the CCSS in mathematics and English language arts/literacy. In addition, the IMET can be used to deepen a shared understanding of the criteria for CCSS-aligned classroom materials. There are four IMET tools, one each for K–8 Mathematics, High School Mathematics*, K–2 English Language Arts* and a combined tool for 3–5 English Language Arts/Literacy & 6–12 English Language Arts.

The IMET should be used for:

• Informing decisions about purchasing a comprehensive textbook or textbook series;
• Evaluating previously purchased materials to identify necessary modifications;
• Building the capacity of educators to better understand what CCSS-aligned textbooks look like; and,
• Informing publishers of the criteria that consumers will use to evaluate RFP responses for a comprehensive textbook or textbook series.

a) Where to find online:
To view and download the IMET, please visit: www.achievethecore.org/materialsevaluationtoolkit

b) Who uses:
The IMET is designed for use by educators and administrators responsible for developing, purchasing and/or evaluating a comprehensive textbook and/or textbook series. This can include content specialists, adoption committees and administrators at the school, district or state level.

c) Target materials:
The IMET is designed to evaluate a comprehensive textbook and/or textbook series (e.g., basal reading series, mathematics series, anthologies, student workbooks, teacher editions and supports) in print and digital format.

d) How to use:
The IMET in both mathematics and English language arts/literacy is organized in two sections:

1. Section I — Non-Negotiables: Materials must fully meet all of the non-negotiables at each grade/course to be aligned to the CCSS and to continue to Section II.

2. Section II — Additional Alignment Criteria and Indicators of Quality: The criteria in this section are additional alignment requirements that should be met by materials fully aligned with the CCSS. A higher score in this section indicates that instructional materials are more closely aligned to the CCSS than instructional materials that have a lower score.

For each non-negotiable in Section I, reviewers should make a determination about whether the materials under review have fully met the criterion based on the metrics provided. For all determinations, reviewers should record a justification to ensure
that judgments and determinations are evidence based. Once all the non-negotiables have been met, then (and only then) should reviewers evaluate materials based upon Section II: Additional Alignment Criteria and Indicators of Quality.

*IMET for High School Mathematics and K-2 English Language Arts/Literacy to be completed in August 2013.
Educators Evaluating Quality Instructional Products (EQuIP) is a collaborative of states working with Achieve to increase the supply of quality instructional materials that are aligned to the CCSS and build the capacity of educators to evaluate and improve the quality of instructional materials for use in their classrooms and schools. The EQuIP Rubrics are a set of quality review tools to evaluate the alignment of lessons, units and modules to the CCSS. There are three EQuIP Rubrics, one each for Mathematics, K–2 English Language Arts/Literacy, and a combined rubric for 3–5 English Language Arts/Literacy and 6–12 English Language Arts. EQuIP builds on a collaborative effort of education leaders from Massachusetts, New York and Rhode Island that Achieve facilitated.

The EQuIP Rubrics should be used for:

- Guiding the development of lessons and units;
- Evaluating existing lessons and units to identify improvements needed to align with the CCSS;
- Building the capacity of teachers to gain a deeper understanding of the instructional demands of the CCSS; and,
- Informing publishers of the criteria that will be applied in the evaluation of proposals and final products.

**a) Where to find online:**
To view and download the rubrics and related training materials, please visit: [www.achieve.org/equip](http://www.achieve.org/equip)

**b) Who uses:**
The EQuIP Rubrics are designed for use by educators and administrators responsible for developing, reviewing or making determinations about materials for use in classrooms. This includes classroom teachers, instructional coaches, instructional leaders and administrators at the school, district or state level.

**c) Target materials:**
The EQuIP Rubrics are designed to evaluate lessons that include instructional activities and assessments aligned to the CCSS that may extend over a few class periods or days as well as units that include integrated and focused lessons aligned to the CCSS that extend over a period of several weeks. The rubrics are not designed to evaluate a single task or activity or portion of a lesson. The rubrics intentionally do not require a specific template for lesson or unit design.

**d) How to use:**
The EQuIP Rubrics can guide the development of lessons and units as well as examine and evaluate existing lessons and units to identify improvements necessary to align with the CCSS. They can be used by individuals or groups, integrated into formal review panels/processes and professional learning communities, and/or used more informally to guide discussions and decision making.

The criteria in the EQuIP Rubrics are separated into four dimensions: Alignment to the Depth of the CCSS, Key Shifts in the CCSS, Instructional Supports, and Assessment. The EQuIP quality review process emphasizes inquiry rather than advocacy; it is intended to yield observations, judgments, discussions and recommendations that are criterion- and evidence-based and designed to provide...
guidance on how to strengthen the lesson or unit. As such, using the EQuIP rubrics and quality review process leads to concrete suggestions for improvement. Dimension 1, Alignment to the Depth of the CCSS, is considered non-negotiable. If materials do not meet many or most of the criteria for Dimension 1 (a rating of 2 or 3) then no further review takes place. In order to be deemed exemplary, a lesson or unit must receive high ratings in all four dimensions.
Assessment Evaluation Tool (AET)

The Assessment Evaluation Tool (AET) is a review tool to evaluate the alignment of grade or course-level assessment materials for alignment with the CCSS, including interim or benchmark assessments and classroom assessments. In addition, the AET can also be used to deepen a shared understanding of the criteria for CCSS-aligned assessments. There are separate AET tools for K–High School Mathematics and 3–12 English Language Arts/Literacy.

The AET should be used for:

- Informing decisions about purchasing assessment materials or item banks designed to address a grade or course;
- Evaluating previously purchased or developed assessment materials and item banks;
- Guiding the development or refinement of individual or sets of assessments in a district or school;
- Building the capacity of educators and content and assessment specialists to better understand what CCSS-aligned assessments look like; and,
- Informing publishers of the criteria that will be applied in the evaluation of proposals and final products.

a) Where to find online:
To view and download the AET, please visit: www.achievethecore.org/materialsevaluationtoolkit

b) Who uses:
The AET is designed for use by educators and administrators responsible for developing, purchasing and/or evaluating sets of assessments and item banks. This includes content specialists, assessment specialists, administrators and educators at the school, district or state level.

c) Target materials:
The AET is designed to evaluate grade or course-level assessment materials for alignment with the CCSS, including interim or benchmark assessments and classroom assessments.

d) How to use
The AET is organized as follows:

1. Non-Negotiables: Materials must fully meet all of the relevant non-negotiables at each grade/course to be aligned to the CCSS.

2. Indicators of Quality: The indicators of quality are additional dimensions of alignment. Although the assessments may be aligned without meeting the indicators of quality, assessments that do reflect these indicators are better aligned. In the AET for English language arts/literacy, the indicators are incorporated directly into each metric and in the AET for mathematics the indicators are found in Section II.

For each non-negotiable, reviewers should make a determination about whether the materials under review have fully met the criterion based on the metrics provided. For all determinations, reviewers should record a justification to ensure that judgments and determinations are evidence based. Once all the relevant non-negotiables have been met, then (and only then) should reviewers evaluate materials based upon the Indicators of Quality.
Assessment Passage and Item Quality Criteria Checklists

The Assessment Passage and Item Quality Criteria Checklists are review tools to evaluate the alignment of individual assessment passages, items and tasks and to deepen shared understanding of the criteria for CCSS-aligned assessment items. There are separate checklist tools for Mathematics Items, English Language Arts/Literacy Passages, and English Language Arts/Literacy Items.

The Assessment Passage and Item Quality Criteria Checklists should be used for:

• Evaluating assessment passages, items and tasks for alignment;

• Guiding the development or refinement of assessment passages, items and tasks;

• Building the capacity of educators and content and assessment specialists to better understand what CCSS-aligned passages, items and tasks look like; and

• Informing publishers and item writers of criteria that will be applied to their passages, items or tasks.

a) Where to find online:
To view and download the Assessment Passage and Item Quality Criteria Checklists, please visit:
www.achievethecore.org/materialsevaluationtoolkit

b) Who uses:
The Assessment Passage and Item Quality Criteria Checklists are designed for use by educators and administrators responsible for developing, purchasing and/or evaluating assessment passages, items or tasks. This includes content specialists and assessment specialists and educators at the school, district or state level.

c) Target materials:
The Assessment Passage and Item Quality Criteria Checklists are designed to evaluate individual assessment passages, items and tasks.

d) How to use:
The criteria for the Assessment Passage and Item Quality Criteria Checklists are grouped into ‘gates’. Passages, items and tasks must pass the first gate in order to be considered for an assessment. The subsequent gates include additional criteria that passages, items or tasks items should meet in order to be fully aligned.
The ultimate goal of the Common Core State Standards (CCSS) is to prepare all students with the knowledge and skills they need for postsecondary success. The EQuIP Student Work Protocol is designed to establish or articulate the relationship between student work and the quality and alignment of instructional materials that previously have been reviewed using the EQuIP quality review process. Focusing on this relationship enables educators to develop a common understanding of the challenging work required by the CCSS. Furthermore, analyzing this relationship will also assist in closing the gap between what students are learning and the expectations embodied in assignments, as well as verifying what students are being taught and what they have learned, remembered, and incorporated into their knowledge and skills. Common expectations will result in more equitable educational opportunities for students and deepen the existing foundation for collaboration among states and districts.

The specific objectives of this EQuIP Student Work Protocol are three-fold:

- To confirm that a lesson’s or unit’s assignment is aligned with the letter and spirit of the targeted Common Core State Standards.
- To determine how students performed on an assignment as evidence of how well designed the lesson/unit is.
- To provide criterion-based suggestions for improving the assignment and related instructional materials.

**a) Where to find online:**
To view and download the EQuIP Student Work Protocol and related training materials, please visit: www.achieve.org/equip

**b) Who uses:**
The EQuIP Student Work Protocol is designed for use by educators, instructional leaders and administrators.

**c) Target materials:**
The EQuIP Student Work Protocol is intended for use with instructional materials that have undergone an EQuIP review, received a rating of E or E/I, and then subsequently have been implemented in an instructional setting to produce samples of student work.

**d) How to use:**
This 5-step protocol begins with a team of reviewers (or a single reviewer) focusing on the assignment itself — the directions or prompt and any accompanying scoring guides. Reviewers identify the content and performances required by the assignment. Reviewers then analyze the standards actually targeted by the author of the lesson/unit and the content and performances they embody. Gaps in alignment are noted. The process then turns to describing how students performed on the assignment and whether and how students demonstrated the expectations of the targeted standards. At the end of the review process, reviewers provide criterion-based feedback regarding improvements that could be made to both the assignment and related instructional materials.
The Toolkit: Tools for Evaluating Alignment of Instructional and Assessment Materials

TOOLKIT
for Evaluating Alignment of Instructional and Assessment Materials to the Common Core State Standards
Instructional Materials Evaluation Tool (IMET)

- Mathematics, Grades K–8 ................................................................. III-1
- Mathematics, High School .............................................................. III-11
- English Language Arts/Literacy, Grades K–2 ................................. III-20
- English Language Arts/Literacy (Grades 3–5) and English Language Arts (Grades 6–12) ..................................................... III-30
Instructional Materials Evaluation Tool for CCSS Alignment in Mathematics Grades K–8 (IMET)

ORGANIZATION

SECTION I: NON-NEGOTIABLE ALIGNMENT CRITERIA

All submissions must meet all of the non-negotiable criteria at each grade level to be aligned to CCSS and before passing on to Section II.

SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY

These elements are additional criteria and indicators of quality. Together, the non-negotiable criteria and the additional alignment criteria reflect the 10 criteria from the K–8 Publishers’ Criteria.

Evaluators must be well versed in the Standards for the grade level of the materials in question, including an understanding of the major work of the grade. It is recommended that evaluators refer to the Spring 2013 K–8 Publishers’ Criteria for Mathematics while using this tool.

Evaluators of materials should understand that at the heart of the Common Core State Standards is a substantial shift in instructional focus, with greater emphasis on:

1) Fluency in major topics
2) Convergence: Think across Grades and Link to Major Topics within a Grade
3) Focus strongly where the Standards focus

mathematics instruction that demands the following:

Evaluators of materials should understand that the heart of the Common Core State Standards is a substantial shift in instructional focus, with greater emphasis on:

Before You Begin

Appropriate for evaluators of supplemental materials.

Please note that this tool is designed for evaluation of comprehensive materials only (print and digital) and will not be appropriate for evaluation of other materials, such as district publications or individual selections, which are more closely aligned.

For more on the major work of the grade, see AchieveTheCore.org/emphases.

For more on the major work of the grade, see AchieveTheCore.org/emphases.
### SECTION I: METRICS

#### Non-Negotiable

<table>
<thead>
<tr>
<th>Grade</th>
<th>Major Clusters</th>
<th>Non-Major Clusters</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>K.CC: A, B, C</td>
<td></td>
</tr>
<tr>
<td></td>
<td>K.MD: A, B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>K.OA: A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>K.G: A, B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>K.NBT: A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OTHER</td>
<td></td>
</tr>
</tbody>
</table>

#### Major Total

<table>
<thead>
<tr>
<th>Grade</th>
<th>Time Spent on Cluster</th>
<th>Days Spent</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1B.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1C.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1D.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1E.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Non-Major Total

<table>
<thead>
<tr>
<th>Grade</th>
<th>Time Spent on Cluster</th>
<th>Days Spent</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1F.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

### Sample Worksheet 1 – Materials focus on the major clusters of each Grade:

**Grade 1: K.CC**

- A
- B
- C

**Grade 2: K.MD**

- A
- B
- C

**Grade 3: K.OA**

- A

**Grade 4: K.G**

- A
- B

**Grade 5: K.NBT**

- A
- B

**Other:**

- C

### Focus on Major

<table>
<thead>
<tr>
<th>Grade</th>
<th>Major Clusters</th>
<th>Non-Major Clusters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Grade 6:**

- A
- B

**Grade 7:**

- A
- B

**Grade 8:**

- A
- B

**Other:**

- C

### Focus on Non-Negotiable

<table>
<thead>
<tr>
<th>Grade</th>
<th>Major Clusters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Grade 9:**

- A

**Grade 10:**

- A

**Focus:**

- K to the major
- Cluster
- on the days
- Subject
- Grade
- students
- **Note:**

- Selected clusters
- for each grade
- (Spring 2013)
### METRICS

#### SECTION I (Cont)

**Focus on Major Work:**

To be aligned to the CCSSM, materials should devote at least 65% and up to 85% of class time to the major work of each grade with Grades K–2 nearer the upper end of this range, i.e., 85% of class time to the major work of each grade within Grades K–2.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Major Total:</th>
<th>Non-Major Total:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Grade</th>
<th>Major Total:</th>
<th>Non-Major Total:</th>
</tr>
</thead>
</table>

**Non-Negotiable:**

Materials must meet the criterion: do not average across two or more grades.

Meet? (Y/N)

Justification/Notes
### SECTION I (continued):

**METRICS**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Grade level introduced in the Standards</th>
<th>Materials assess these topics only at, or after, the indicated grade level</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>2A. Probability, including chance, likely outcomes, probability models.</td>
<td>7</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>2B. 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.</td>
<td>6</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>2C. Similarity, congruence, or geometric transformations.</td>
<td>8</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>2D. Symmetry of shapes, including line/reflection symmetry, rotational symmetry.</td>
<td>4</td>
<td>T</td>
<td>F</td>
</tr>
</tbody>
</table>

To be aligned to the CCSSM, materials cannot assess above-named topics before they are introduced in the CCSSM. All four of the T/F items above must be marked ‘true’ (T).

<table>
<thead>
<tr>
<th>Meet? (Y/N)</th>
<th></th>
</tr>
</thead>
</table>

**Justification/Notes**

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7 Refer also to criterion #2 in the K-8 Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).
SECTION I (continued):

Non-Negotiable 3. RIGOR AND BALANCE: Each grade’s instructional materials reflect the balances in the Standards and help students meet the Standards’ rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application.8

<table>
<thead>
<tr>
<th>METRICS</th>
<th>Sample Worksheet 3 – Rigor and balance within each grade</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aspects of Rigor</strong></td>
<td><strong>True/False</strong></td>
</tr>
<tr>
<td>3A. Attention to Conceptual Understanding: Materials develop conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings.</td>
<td>T</td>
</tr>
<tr>
<td>3B. Attention to Procedural Skill and Fluency: Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency.</td>
<td>T</td>
</tr>
<tr>
<td>3C. Attention to Applications: Materials are designed so that teachers and students spend sufficient time working with engaging applications, without losing focus on the major work of each grade.</td>
<td>T</td>
</tr>
<tr>
<td>3D. Balance: The three aspects of rigor are not always treated together, and are not always treated separately</td>
<td>T</td>
</tr>
</tbody>
</table>

To be aligned to the CCSSM, materials for each grade must attend to each element of rigor and must represent the balance reflected in the Standards. All four of the T/F items above must be marked ‘true’ (T). Meet? (Y/N)

<table>
<thead>
<tr>
<th>Justification/Notes</th>
</tr>
</thead>
</table>

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8 Refer also to criterion #4 in the K–8 Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).
### SECTION I (continued): METRICS

<table>
<thead>
<tr>
<th>Non-Negotiable 4. PRACTICE-CONTENT CONNECTIONS: Materials meaningfully connect the Standards for Mathematical Content and the Standards for Mathematical Practice.</th>
<th>Sample Worksheet 4 – Connections between the Standards for Mathematical Practice and Standards for Mathematical Content</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Practice-Content Connections</strong></td>
<td><strong>True / False</strong></td>
</tr>
<tr>
<td>4A. The materials connect the Standards for Mathematical Practice and the Standards for Mathematical Content.</td>
<td>T</td>
</tr>
<tr>
<td>4B. The developer provides a description or analysis, aimed at evaluators, which shows how materials meaningfully connect the Standards for Mathematical Practice to the Standards for Mathematical Content within each applicable grade.</td>
<td>T</td>
</tr>
</tbody>
</table>

To be aligned to the CCSSM, materials must 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 materials for each grade. Both of the T/F items above must be marked ‘true’ (T).

<table>
<thead>
<tr>
<th>Meet? (Y/N)</th>
</tr>
</thead>
</table>

### Justification/Notes

Materials must meet all four non-negotiable criteria listed above to be aligned to the CCSS and to continue to the evaluation in Section II.

---

9 Refer also to criterion #7 in the K–8 Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).
10 All items do not need to align to a Mathematical Practice. In addition, there is no requirement to have an equal balance among the Mathematical Practices in any set of materials or grade.
**SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY**

Materials must meet all four non-negotiable criteria listed above to be aligned to the CCSS and to continue the evaluation in Section II.

Section II includes additional criteria for alignment to the Standards as well as indicators of quality. Indicators of quality are scored differently from the other criteria: a higher score in Section II indicates that materials are more closely aligned. Instructional materials evaluated against the criteria in Section II will be rated on the following scale:

- **2** – (meets criteria): A score of 2 means that the materials meet the full intention of the criterion in all grades.
- **1** – (partially meets criteria): A score of 1 means that the materials meet the full intention of the criterion for some grades or meets the criterion in many aspects but not the full intent of the criterion.
- **0** – (does not meet criteria): A score of 0 means that the materials do not meet many aspects of the criterion.

For Section II parts A, B, and C, districts should determine the minimum number of points required for approval. Before evaluation, please review sections A – C, decide the minimum score according to the needs of your district, and write in the number for each section.

<table>
<thead>
<tr>
<th>II(A). ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Supporting content enhances focus and coherence simultaneously by engaging students in the major work of the grade.(^{11})</td>
<td>2 \hspace{1cm} 1 \hspace{1cm} 0</td>
</tr>
<tr>
<td>2. Materials are consistent with the progressions in the Standards.(^{11})</td>
<td>2 \hspace{1cm} 1 \hspace{1cm} 0</td>
</tr>
<tr>
<td>2A. Materials base content progressions on the grade-by-grade progressions in the Standards.</td>
<td>2 \hspace{1cm} 1 \hspace{1cm} 0</td>
</tr>
<tr>
<td>2B. Materials give all students extensive work with grade-level problems.</td>
<td>2 \hspace{1cm} 1 \hspace{1cm} 0</td>
</tr>
<tr>
<td>2C. Materials relate grade level concepts explicitly to prior knowledge from earlier grades.</td>
<td>2 \hspace{1cm} 1 \hspace{1cm} 0</td>
</tr>
<tr>
<td>3. Materials foster coherence through connections at a single grade, where appropriate and where required by the Standards.(^{11})</td>
<td>2 \hspace{1cm} 1 \hspace{1cm} 0</td>
</tr>
<tr>
<td>3A. Materials include learning objectives that are visibly shaped by CCSSM cluster headings.</td>
<td>2 \hspace{1cm} 1 \hspace{1cm} 0</td>
</tr>
<tr>
<td>3B. Materials including problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade, in cases where these connections are natural and important.</td>
<td>2 \hspace{1cm} 1 \hspace{1cm} 0</td>
</tr>
<tr>
<td>3C. Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives.</td>
<td>2 \hspace{1cm} 1 \hspace{1cm} 0</td>
</tr>
</tbody>
</table>

**MUST HAVE _____ POINTS IN SECTION II(A) FOR APPROVAL\(^{14}\)**

---

\(^{11}\) Refer also to criterion #3 in the K–8 Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).

\(^{12}\) Refer also to criterion #5 in the K–8 Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).

\(^{13}\) Refer also to criterion #6 in the K–8 Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).

\(^{14}\) For district determination

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### SECTI0N II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY (Continued)

<table>
<thead>
<tr>
<th>II(B). ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE</th>
<th>SCORE</th>
<th>JUSTIFICATION/NOTES</th>
</tr>
</thead>
</table>
| 4. Focus and Coherence via Practice Standards: Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.  
  \[15\] | 2 1 0 | |
| 5. Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.  
  \[16\] | 2 1 0 | |
| 6. Emphasis on Mathematical Reasoning: Materials support the Standards’ emphasis on mathematical reasoning by\[17\]: | | |
| 6A. Materials prompt students to construct viable arguments and critique the arguments of other concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). | 2 1 0 | |
| 6B. Materials engage students in problem solving as a form of argument. | 2 1 0 | |
| 6C. Materials explicitly attend to the specialized language of mathematics. | 2 1 0 | |

**MUST HAVE _____ POINTS IN SECTION II(B) FOR APPROVAL**  

| Score: |  |

---

\[15\] Refer also to criterion #8 in the K–8 Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).

\[16\] Refer also to criterion #9 in the K–8 Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).

\[17\] Refer also to criterion #10 in the K–8 Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).

\[18\] For district determination

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8
### SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY (Continued)

<table>
<thead>
<tr>
<th>II(C). INDICATORS OF QUALITY</th>
<th>SCORE</th>
<th>JUSTIFICATION/NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. The underlying design of the materials distinguishes between problems and exercises. In essence the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>8. Design of assignments is not haphazard: exercises are given in intentional sequences.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>9. There is variety in the pacing and grain size of content coverage.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>10. There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>11. Lessons are thoughtfully structured and support the teacher in leading the class through the learning paths at hand, with active participation by all students in their own learning and in the learning of their classmates.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>12. There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of students responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>13. Manipulatives are faithful representations of the mathematical objects they represent.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>14. Manipulatives are connected to written methods.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>15. Materials are carefully reviewed by qualified individuals, whose names are listed, in an effort to ensure freedom from mathematical errors and grade-level appropriateness.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>16. The visual design isn’t distracting or chaotic, but supports students in engaging thoughtfully with the subject.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>17. Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.</td>
<td>2 1 0</td>
<td></td>
</tr>
</tbody>
</table>

**MUST HAVE _____ POINTS IN SECTION II(C) FOR APPROVAL**

---

19 For background information on the indicators of quality in this section, refer to pp.18-21 in the K–8 Publishers’ Criteria for Mathematics.

20 For district determination
### FINAL EVALUATION

In this section compile scores for Section I, Section II(A), Section II(B), Section II(C) to make a final decision for the material under review.

<table>
<thead>
<tr>
<th>SECTION</th>
<th>PASS/FAIL (P/F)?</th>
<th>FINAL JUSTIFICATIONS/NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section II(A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section II(B)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section II(C)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FINAL DECISION FOR THIS MATERIAL**

<table>
<thead>
<tr>
<th>PURCHASE (Y/N)?</th>
</tr>
</thead>
</table>
The Instructional Materials Evaluation Tool (IMET) is a resource to evaluate instructional materials and assist publishers and organizations in understanding what CCSS-aligned textbooks look like. It is designed for evaluation of comprehensive materials only (print and digital) and will not be appropriate for evaluating supplemental materials.

### Alignment to the Common Core State Standards

**REVIEW**

Evaluator:_________________ Book:_____________________ Course:______ Publisher:__________________ Year:_______

Before you begin:

- **Explain to publishers that the IMET is designed to align with the CCSS and cannot be used for text that does not align with the CCSS.**
- **Publish materials that are CCSS-aligned.**
- **Explain the purpose of the IMET and how it will help publishers understand what CCSS-aligned textbooks look like.**

### Organization

**SECTION I: NON-NEGOTIABLE ALIGNMENT CRITERIA**

All submissions must fully meet all of the non-negotiable criteria at each course level to be aligned to CCSS and before passing on to Section II.

**SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY**

The criteria in this section are additional alignment requirements that should be met by materials fully aligned with CCSS. A higher score in this section indicates that instructional materials are aligned to higher quality and more closely aligned to the Standards than the criteria in Section I. These criteria should be met by materials fully aligned with CCSS.

### Before You Begin

Evaluators should understand that at the heart of the Common Core State Standards is a substantial shift in mathematics instruction that demands the following:

1. **Focus strongly where the Standards focus**
2. **Coherence:** Think across grades/courses and link to major topics within a course
3. **Rigor:** In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Evaluators of materials must be well versed in the Standards related to the particular course, including understanding the Widely Applicable Prerequisites, how the content fits into the progressions in the Standards, and the expectations of the Standards with respect to conceptual understanding, fluency, and application.

It is also recommended that evaluators refer to the Spring 2013 High School Publishers’ Criteria for Mathematics while using this tool.

### Review

Evaluator:_________________ Book:_____________________ Course:______ Publisher:__________________ Year:_______

Before you begin:

- **Explain to publishers that the IMET is designed to align with the CCSS and cannot be used for text that does not align with the CCSS.**
- **Publish materials that are CCSS-aligned.**
- **Explain the purpose of the IMET and how it will help publishers understand what CCSS-aligned textbooks look like.**

### Organization

**SECTION I: NON-NEGOTIABLE ALIGNMENT CRITERIA**

All submissions must fully meet all of the non-negotiable criteria at each course level to be aligned to CCSS and before passing on to Section II.

**SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY**

The criteria in this section are additional alignment requirements that should be met by materials fully aligned with CCSS. A higher score in this section indicates that instructional materials are higher quality and more closely aligned to the Standards than instructional materials with a lower score.

Together, the non-negotiable criteria and the additional alignment criteria reflect the 8 criteria from the High School Publishers’ Criteria for Mathematics. The indicators of quality are taken from the High School Publishers’ Criteria as well. For more information on these elements, see achievethecore.org/publisherscriteria.
### SECTION I: NON-NEGOTIABLE ALIGNMENT CRITERIA

For each non-negotiable in Section I, reviewers should make a determination about whether the materials under review have fully met the criterion based on the metrics provided. For all determinations, reviewers should record a justification to ensure that judgments and decisions are evidence based. Once all the non-negotiables have been met, then (and only then) should reviewers continue to evaluate materials based upon Section II.

#### SECTION I: SAMPLE EVALUATION INFORMATION

<table>
<thead>
<tr>
<th>Non-Negotiable 1. FOCUS IN HIGH SCHOOL:</th>
<th>Sample Worksheet 1 – Materials focus on Widely Applicable Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>In any single course, students and teachers using the materials as designed spend the majority of their time developing knowledge and skills that are widely applicable as prerequisites for postsecondary education.² ³</td>
<td>Focus in High School</td>
</tr>
<tr>
<td>1A. In any single course, students spend at least 50% of their time on Widely Applicable Prerequisites.⁴</td>
<td>T</td>
</tr>
<tr>
<td>1B. Student work in Geometry significantly involves applications/modeling as well as geometry applications that use algebra skills.⁵</td>
<td>T</td>
</tr>
</tbody>
</table>
| 1C. There are problems at a level of sophistication appropriate to high school (beyond mere review of middle school topics) that involve the application of knowledge and skills from grades 6-8 including⁶:  
  • Applying ratios and proportional relationships.  
  • Applying percentages and unit conversions, e.g., in the context of complicated measurement problems involving quantities with derived or compound units (such as mg/mL, kg/m³, acre-feet, etc.).  
  • Applying basic function concepts, e.g., by interpreting the features of a graph in the context of an applied problem.  
  • Applying concepts and skills of geometric measurement e.g., when analyzing a diagram or schematic.  
  • Applying concepts and skills of basic statistics and probability (see 6–8.SP).  
  • Performing rational number arithmetic fluently. | T | F |

To be aligned to the CCSSM, materials should devote the majority of class time developing knowledge and skills that are widely applicable as prerequisites for postsecondary education. All three of the T/F items above must be marked ‘true’ (T).

Meet? (Y/N)  
Justification/Notes

---

² Refer also to criterion #1 in the High School Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).
³ If materials show time in both block and standard ‘days,’ choose either but remain consistent.
⁴ For more information on the Widely Applicable Prerequisites, see Table 1 on Page 8 of the High School Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).
⁵ Since the Geometry category itself contains relatively fewer Widely Applicable Prerequisites, this criterion is important to help foster students’ college and career readiness.
⁶ Information excerpted from Table 1 on Page 8 of the High School Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).
### SECTION I (continued):

**Non-Negotiable 2. CONSISTENT, COHERENT CONTENT**

Each course’s instructional materials are coherent and consistent with the content in the Standards.7

| Sample Worksheet 2 – Consistent, coherent content within each course |
|---------------------------------------------------|----------------|
| **2A. Giving all students extensive work with course-level problems:** Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year. | True/False |
| | Evidence |
| | T |
| | F |

| **2B. Relating course-level concepts explicitly to prior knowledge from earlier grades and courses:** The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge. | True/False |
| | Evidence |
| | T |
| | F |

To be aligned to the CCSSM, materials for each course must be coherent and consistent with the content in the Standards. Both of the T/F items above must be marked ‘true’ (T).

<table>
<thead>
<tr>
<th>Meet? (Y/N)</th>
</tr>
</thead>
</table>

### Justification/Notes

---

7 Refer also to criterion #3 in the High School Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).
### SECTION I (continued):

#### SAMPLE EVALUATION INFORMATION

<table>
<thead>
<tr>
<th>Non-Negotiable 3. RIGOR AND BALANCE:</th>
<th>SAMPLE EVALUATION INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Each grade’s instructional materials reflect the balances in the Standards and help students meet the Standards’ rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. 8</td>
<td>Sample Worksheet 3 – Rigor and balance within each course</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Balancing the Aspects of Rigor</th>
<th>True/False</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3A. Attention to Conceptual Understanding:</strong> Materials develop conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td><strong>3B. Attention to Procedural Skill and Fluency:</strong> Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td><strong>3C. Attention to Applications:</strong> Materials are designed so that teachers and students spend sufficient time working with engaging applications/modeling.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td><strong>3D. Balance:</strong> The three aspects of rigor are not always treated together, and are not always treated separately</td>
<td>T</td>
<td>F</td>
</tr>
</tbody>
</table>

To be aligned to the CCSSM, materials for each course must attend to each element of rigor and must represent the balance reflected in the Standards. All four of the T/F items above must be marked ‘true’ (T).

<table>
<thead>
<tr>
<th>Meet? (Y/N)</th>
</tr>
</thead>
</table>

Justification/Notes

---

8 Refer also to criterion #2 in the High School Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).

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### SECTION I (continued):

**Non-Negotiable 4. PRACTICE-CONTENT CONNECTIONS:**

Materials meaningfully connect the Standards for Mathematical Content and the Standards for Mathematical Practice.\(^9\)

<table>
<thead>
<tr>
<th>Practice-Content Connections</th>
<th>True/False</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>4A. The materials connect the Standards for Mathematical Practice and the Standards for Mathematical Content.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>4B. The developer provides a description or analysis, aimed at evaluators, which shows how materials meaningfully connect the Standards for Mathematical Practice to the Standards for Mathematical Content within each applicable course.</td>
<td>T</td>
<td>F</td>
</tr>
</tbody>
</table>

To be aligned to the CCSSM, materials must 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 materials for each course. Both of the T/F items above must be marked ‘true’ (T).

**Meet? (Y/N)**

**Justification/Notes**

---

Materials must meet all four non-negotiable criteria listed above to be aligned to the CCSS and to continue to the evaluation of Section II.

---

\(^9\) Refer also to criterion #5 in the High School Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY

Materials must meet all four non-negotiable criteria listed above to be aligned to the CCSS and to continue the evaluation to Section II.

Section II includes additional criteria for alignment to the Standards as well as indicators of quality. Indicators of quality are scored differently from the other criteria: a higher score in this section indicates that instructional materials are higher quality and more closely aligned to the Standards than instructional materials that have a lower score. Instructional materials evaluated against the criteria in Section II will be rated on the following scale:

- 2 – (meets criteria): A score of 2 means that the materials meet the full intention of the criterion in all courses.
- 1 – (partially meets criteria): A score of 1 means that the materials meet the full intention of the criterion for some courses or meets the criterion in many aspects but not the full intent of the criterion.
- 0 – (does not meet criteria): A score of 0 means that the materials do not meet many aspects of the criterion.

For Section II parts A, B, and C, districts should determine the minimum number of points required for approval. Before evaluation, please review sections A – C, decide the minimum score according to the needs of your district, and write in the number for each section.

### II(A). ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT

<table>
<thead>
<tr>
<th>SCORE</th>
<th>JUSTIFICATION/NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Materials are consistent with the content in the Standards. Materials base courses on the content specified in the Standards.</td>
<td>2 1 0</td>
</tr>
<tr>
<td>2. Materials foster coherence through connections in a single course, where appropriate and where required by the Standards.</td>
<td>2 1 0</td>
</tr>
<tr>
<td>2A. Materials include learning objectives that are visibly shaped by CCSSM cluster and domain headings.</td>
<td>2 1 0</td>
</tr>
<tr>
<td>2B. Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a category, or two or more categories, in cases where these connections are natural and important.</td>
<td>2 1 0</td>
</tr>
<tr>
<td>2C. Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives.</td>
<td>2 1 0</td>
</tr>
</tbody>
</table>

**MUST HAVE _____ POINTS IN SECTION II(A) FOR APPROVAL**

---

10 Refer also to criterion #3 in the HS Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).
11 Refer also to criterion #4 in the HS Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).
12 For district determination
### SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY (Continued)

<table>
<thead>
<tr>
<th>II(B). ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE</th>
<th>SCORE</th>
<th>JUSTIFICATION/NOTES</th>
</tr>
</thead>
</table>
| 3. Focus and Coherence via Practice Standards: Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.  
  Refer also to criterion #6 in the HS Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013). | 2 1 0 | |
| 4. Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.  
  Refer also to criterion #7 in the HS Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013). | 2 1 0 | |
| 5. Emphasis on Mathematical Reasoning: Materials support the Standards’ emphasis on mathematical reasoning.  
  Refer also to criterion #8 in the HS Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013). | 2 1 0 | |
| 5A. Materials prompt students to construct viable arguments and critique the arguments of other concerning key course-level mathematics that is detailed in the content standards (cf. MP.3). | 2 1 0 | |
| 5B. Materials engage students in problem solving as a form of argument. | 2 1 0 | |
| 5C. Materials explicitly attend to the specialized language of mathematics. | 2 1 0 | |

**MUST HAVE _____ POINTS IN SECTION II(B) FOR APPROVAL**

### Score:

---

13 Refer also to criterion #6 in the HS Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).
14 Refer also to criterion #7 in the HS Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).
15 Refer also to criterion #8 in the HS Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).
16 For district determination
### SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY (Continued)

<table>
<thead>
<tr>
<th>II(C). INDICATORS OF QUALITY</th>
<th>SCORE</th>
<th>JUSTIFICATION/NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Materials support the uses of technology as called for in the Standards.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>7. The underlying design of the materials distinguishes between problems and exercises. In essence, the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>8. Design of assignments is not haphazard: exercises are given in intentional sequences.</td>
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<td>9. There is variety in the pacing and grain size of content coverage.</td>
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<td>10. There is variety in what students produce. For example, students are assigned to produce answers and solutions, but also, in a course-appropriate way, arguments and explanations, diagrams, mathematical models, etc.</td>
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<td></td>
</tr>
<tr>
<td>11. Lessons are thoughtfully structured and support the teacher in leading the class through the learning paths at hand, with active participation by all students in their own learning and in the learning of their classmates.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>12. There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of students responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>13. Manipulatives are faithful representations of the mathematical objects they represent.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>14. Manipulatives are connected to written methods.</td>
<td>2 1 0</td>
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<tr>
<td>15. Materials are carefully reviewed by qualified individuals, whose names are listed, in an effort to ensure freedom from mathematical errors, age-appropriateness, freedom from bias, and freedom from unnecessary language complexity.</td>
<td>2 1 0</td>
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<tr>
<td>16. The visual design isn’t distracting or chaotic, but supports students in engaging thoughtfully with the subject.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>17. Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.</td>
<td>2 1 0</td>
<td></td>
</tr>
</tbody>
</table>

**MUST HAVE _____ POINTS IN SECTION II(C) FOR APPROVAL**

| Score: | 17 |

---

17 For background information on the indicators of quality in this section, refer to pp.16-18 in the High School Publishers’ Criteria for Mathematics.

18 For district determination
## FINAL EVALUATION

In this section compile scores for Section I, Section II(A), Section II(B), Section II(C) to make a final decision for the material under review.

<table>
<thead>
<tr>
<th>SECTION</th>
<th>PASS/FAIL (P/F)?</th>
<th>FINAL JUSTIFICATIONS/NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section I</td>
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<tr>
<td>Section II(A)</td>
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<td>Section II(B)</td>
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<tr>
<td>Section II(C)</td>
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**FINAL DECISION FOR THIS MATERIAL**

<table>
<thead>
<tr>
<th>PURCHASE (Y/N)?</th>
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</table>
To evaluate ELA course submissions for any grade from K-2 for alignment with the Common Core State Standards (CCSS), analyze the materials against the non-negotiable criteria in the table below. Instructional submissions must meet all of the relevant non-negotiable criteria and metrics to align with the CCSS. Criteria labeled as indicators of superior quality at the end of the tool (section II) are different from the non-negotiable criteria. Although instructional materials may be aligned without meeting these indicators of superior quality, submissions that do reflect these indicators are likely higher quality.

BEFORE YOU BEGIN
Evaluators should be aware that at the heart of the Common Core State Standards there are substantial shifts in ELA/Literacy that require the following:

1. Regular practice with complex text and its academic language
2. Reading, writing and speaking grounded in evidence from text, both literary and informational
3. Building knowledge through content-rich non-fiction

Evaluators of submissions must be well versed in the standards for the grade level of the materials in question. It is also recommended that evaluators refer to the Publishers’ Criteria for the Common Core State Standards in ELA/literacy grades K-2 and the Supplement to Appendix A of the Common Core State Standards for ELA/Literacy: New Research on Text Complexity.

### Section I: Non-Negotiable Criteria

<table>
<thead>
<tr>
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<th>MEETS METRICS (Y/N)</th>
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<tbody>
<tr>
<td><strong>I. Foundational Skills (including criteria specific to student reading materials in grades K and 1)</strong></td>
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<tr>
<td>Non-Negotiable 1. FOUNDATIONAL SKILLS ARE SYSTEMATICALLY TAUGHT, ASSESSED AND REINFORCED:</td>
<td>1a) Submissions address grade-level foundational skills by providing instruction in concepts of print, phonological awareness, letter recognition, phonics, word awareness and reading fluency in a logical and transparent progression.</td>
<td>Y</td>
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<tr>
<td></td>
<td>1b) Student reading materials faithfully follow the sequence of foundational skills instruction while providing abundant opportunities for every student to become proficient in each of the foundational skills.</td>
<td>Y</td>
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<tr>
<td></td>
<td>1c) Materials are designed so there are regular opportunities for students to practice reading fluency both orally and silently with appropriate texts of a wide variety of types.</td>
<td>Y</td>
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<tr>
<td></td>
<td>1d) Materials provide regular practice in encoding (spelling) the sound symbol relationships of English.</td>
<td>Y</td>
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<tr>
<td></td>
<td>1e) Materials provide instruction and practice in word study including pronunciation, roots, prefixes, suffixes and spelling/sound patterns, as well as decoding of grade-level words by using sound-symbol knowledge and knowledge of</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>NON-NEGOTIABLE CRITERIA FOR ALIGNMENT TO CCSS</td>
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<tr>
<td>foundational skills as they are introduced.</td>
<td>syllabication.</td>
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<tr>
<td>1f) Materials guide students to read with purpose and understanding and to make frequent connections between acquisition of foundation skills and making meaning from reading.</td>
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<tr>
<td>1g) Materials provide opportunities for educators to monitor student progress on every aspect of the foundational skills through diagnostic assessments offered at regular intervals. Monitoring must also allow for students to receive regular feedback on their oral reading fluency in the specific areas of appropriate rate, expressiveness and accuracy.</td>
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<tr>
<td>1h) Submissions provide abundant and easily implemented materials so teachers can readily provide more time, attention and practice for those students who need it.</td>
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### Section I: Non-Negotiable Criteria

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<tr>
<td><strong>II. Text Selection</strong></td>
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<tr>
<td><strong>Non-Negotiable 2. COMPLEXITY OF TEXTS</strong> (note: for K and 1 this refers to material intended for reading aloud. Evaluations of text complexity are not applicable to student reading materials until 2nd grade).**</td>
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<tr>
<td>The submission exhibits concrete evidence of the selection criteria that have been used to demonstrate texts align to the quality expectations laid out in the standards. Beginning in <strong>grade two</strong>, submissions include proof that the texts are at the level of quantitative and qualitative complexity as proof of the suitability of the texts. In all grades, extensive read-aloud selections allow sufficient opportunity for engagement with text more complex than students could read themselves.</td>
<td>2a) Texts in all grades must be accompanied by specific evidence that they have been analyzed for their qualitative features and/or instructional value justifying and indicating a specific grade-level placement. 2b) Beginning in grade 2, texts align with the complexity requirements outlined in the standards. This means that 100% of texts for second grade must be accompanied by specific evidence that they have been analyzed with at least one research-based quantitative measure for grade-band placement. 2c) In addition to texts at the K-2 level of complexity, materials include read-aloud selections at levels of complexity well above what students can read on their own.</td>
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</table>
| **Non-Negotiable 3. RANGE AND VOLUME OF TEXTS:** Submissions must reflect the distribution of text types and genres required by the standards. | 3a) In grades K-2, literacy programs shift the balance of texts and instructional time to 50% literature / 50% informational text. 3b) A large majority of texts included in instructional materials reflect the genres and text characteristics that are specifically required by the standards at each grade level. 3c) Submissions pay careful attention to providing a sequence or collection of texts that “systematically build the knowledge
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<td>base of students” (CCSS, 33). Activities should include reading, writing, listening and speaking about topics under study. Read-aloud selections supplement what students can read themselves to ensure that all students can build knowledge about the world through engagement with text. <strong>3d</strong> Within a sequence or collection of texts, specific, especially rich anchor texts of (keystone texts) are selected for especially careful reading. These texts should have more opportunities built in for students to interact with the text.</td>
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<tr>
<td><strong>Non-Negotiable 4. QUALITY OF TEXTS:</strong> The quality of texts is high—they are worth reading closely and exhibit exceptional craft and thought and/or provide useful information (note: for K and 1 this refers to material intended for reading aloud. Evaluations of text for quality and complexity are not applicable to student reading materials until 2nd grade).</td>
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<tr>
<td><strong>4a</strong> Texts must be worth reading and listening to; they must be content rich, representing the best available writing in their type, genre and subject matter. <strong>3b</strong> History/social studies and science/technical selections, specifically, must enable students to develop rich content knowledge.</td>
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<tr>
<td>III. Questions and Tasks</td>
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<tr>
<td><strong>Non-Negotiable 5. TEXT-DEPENDENT AND TEXT-SPECIFIC QUESTIONS</strong> (note: for K and 1 this refers to material intended for reading aloud):</td>
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<tr>
<td>At least 80% of all comprehension questions (for read-alouds or texts students can read independently) are text-dependent, and text-specific questions. The majority of these questions draw student attention to the particulars in the text.</td>
<td>5a) Text-dependent questions and tasks reflect the requirements of Reading Standard 1 by expecting students to use details from the text to demonstrate understanding and to support their ideas about the text. These ideas are expressed through both written and spoken responses.</td>
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<td>5b) Questions are sequenced to guide students in delving deeper into text and graphics.</td>
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<td>5c) Questions and tasks promote the thinking required by the standards at each grade level (Note: not every standard must be assessed with every text.)</td>
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<td>5d) Questions and tasks pay particular attention to the academic language (vocabulary and syntax) in the text and support students in and learning new vocabulary from every reading opportunity.</td>
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<tr>
<td><strong>Non-Negotiable 6. SCAFFOLDING AND SUPPORTS:</strong></td>
<td>6a) Pre-reading activities should be no more than 10% of time devoted to any reading instruction.</td>
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<tr>
<td>The submission provides all students, including those who read below grade level, with extensive opportunities to encounter and comprehend grade-level complex text (either listened to or read) as required by the standards at each grade. Materials direct teachers to return to focused parts of the text to guide students through rereading, discussion and writing about the ideas, events, and information found there. These opportunities are offered</td>
<td>6b) Read aloud materials must be built with the goal of students gaining full comprehension of complex text rather than substituting mastery of strategies. This means reading strategies have to support comprehension of specific texts and focus on building knowledge and insight. Texts must not serve solely as platforms to practice discrete strategies.</td>
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<td>6c) Questions and tasks require careful comprehension of the text as a precursor to asking students for evaluation.</td>
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<td>6d) Questions and tasks that address academic language (vocabulary and syntax) support students in unpacking the meaning of complex texts students hear read.</td>
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<td>6e) Submissions offer monitoring opportunities that</td>
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</table>
| regularly and systematically. | genuinely measure progress and provide the teacher and student with timely feedback.  
6f) When diagnostics indicate students are not comprehending what they hear or read, materials must be present to provide both reteaching and additional student learning opportunities. These materials must be easily implemented.  
6g) Materials must include gradual release of supporting scaffolds for students at each grade level in order for teachers to measure their students’ independent abilities accurately. |
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<tbody>
<tr>
<td><strong>IV. Writing to Sources</strong>&lt;br&gt;Non-Negotiable 7. WRITING TO SOURCES&lt;br&gt;Writing based on what has been read or heard is a key emphasis in the CCSS at every grade level.&lt;br&gt;Writing assignments are prominent and varied and ask students to draw on their experience, imagination, current capacities, and most frequently, the texts they encounter through reading or read-alouds as source material. As a means to such expression, materials provide sufficient opportunities for all students to practice newly acquired foundational skills as well as other forms of self-expression.</td>
<td></td>
<td></td>
<td>7a) Students engage in a full range of writing as outlined by the standards at each grade level. This includes writing about what they are hearing or reading, writing narratives (both real and imagined), writing to inform or explain, and writing opinions.&lt;br&gt;7c) Submissions address grade-level foundation standards that require students in the early grades to know their letters, phonetic conventions, sentence structures, and spelling.&lt;br&gt;7d) Materials provide opportunities for educators to monitor student progress in the development of these foundational skills and respond to the needs of individual students. This monitoring should include attention to invented spelling as appropriate for its diagnostic value.</td>
</tr>
</tbody>
</table>
### Section I: Non-Negotiable Criteria

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<tr>
<td><strong>V. Speaking and Listening</strong></td>
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</tr>
<tr>
<td><strong>Non-Negotiable 8: SPEAKING AND LISTENING:</strong></td>
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</tbody>
</table>
| To be CCSS-aligned, submissions should promote frequent and regular discussions about texts students have heard or read. Materials assessing speaking and listening must reflect communication skills required for real world applications. | 8a) As a regular part of comprehension instruction, materials must contain activities designed to promote frequent opportunities for speaking with and listening to peers about texts (listened to or read).  
8b) Submissions include a variety of authentic, real world speaking and listening activities for student practice.  
8c) Materials demonstrate connections and alignment between the speaking and listening standards, reading standard 4, and the related language standards. |                     |                         |
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<tr>
<td><strong>VI. Language</strong></td>
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<tr>
<td><strong>Non-Negotiable 9: LANGUAGE:</strong></td>
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</tbody>
</table>
| Submissions must adequately address the Language standards for the grade. | 9a) Submissions address the grammar and language conventions specified by the Language standards at each grade level.  
9b) Submissions provide a mirror of real-world activities for student practice with natural language (e.g. mock interviews, presentations).  
9c) Materials create opportunities for students to discover accurate usage patterns, compare them with their own, and gain facility in usage and language conventions in a grade-by-grade pathway.  
9d) Submissions demonstrate connections and alignment between the language standards, reading standard 4, and the related speaking and listening standards. | | | |
### Section II: Indicators of Superior Quality

<table>
<thead>
<tr>
<th>Indicator of Superior Quality</th>
<th>MEETS METRICS (Y/N)</th>
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</thead>
<tbody>
<tr>
<td><strong>VIII. Usefulness, Design, and Focus</strong></td>
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<tr>
<td>Do the student resources include ample review and easily implemented practice resources, clear directions, and explanations?</td>
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<tr>
<td>Are the materials easy to use and cleanly laid out for students and teachers? Does every page of the submission add to student learning rather than distract from it? Are reading selections centrally located within the materials and obviously the point of focus?</td>
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<tr>
<td>Are there suggestions and materials for adapting instruction for varying student needs? (e.g., alternative teaching approaches, pacing, instructional delivery options, suggestions for addressing common student difficulties, remediation strategies)</td>
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<tr>
<td>Can the teacher and student reasonably complete the content presented within a regular school year and does the pacing of content allow for maximum student understanding? Do the submissions provide clear guidance to teachers about the amount of time the lesson might reasonably take?</td>
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<tr>
<td>Do the materials offer clear explanations to teachers in principles of early reading and skills acquisition?</td>
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<tr>
<td>Do the materials build a coherent sequence of meaning and make connections for students?</td>
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<tr>
<td>For second grade, additional materials markedly increase the opportunity for regular independent reading of texts that connect to classroom topics and/or appeal to students’ interests in order to develop both knowledge and love of reading.</td>
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<tr>
<td>Do instructions allow for careful reading of content? Do they provide different purposes for multiple readings of the text to keep students engaged and reading for deep understanding?</td>
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<tr>
<td>Do the submissions designed for teacher guidance contain clear statements and explanation of purpose, goals, and expected outcomes?</td>
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</table>
To evaluate each grade’s or course’s materials for alignment with the Common Core State Standards (CCSS), analyze the materials against the non-negotiable criteria in the table below. Instructional materials must meet all of the relevant non-negotiable criteria and metrics to align with the CCSS. Criteria labeled as indicators of superior quality at the end of the tool (section II) are different from the non-negotiable criteria. Although instructional materials may be aligned without meeting these indicators of superior quality, materials that do reflect these indicators are better aligned.

**BEFORE YOU BEGIN**
Evaluators should be aware that at the heart of the Common Core State Standards there are substantial shifts in ELA/Literacy that require the following:
1. Regular practice with complex text and its academic language
2. Reading, writing and speaking grounded in evidence from text, both literary and informational
3. Building knowledge through content-rich non-fiction

Evaluators of materials must be well versed in the standards for the grade level of the materials in question. It is also recommended that evaluators refer to the Publishers’ Criteria for the Common Core State Standards in ELA/literacy grades 3-12 and the Supplement to Appendix A of the Common Core State Standards for ELA/Literacy: New Research on Text Complexity.

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<td>I. Text Selection</td>
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</tr>
<tr>
<td>Non-Negotiable 1. COMPLEXITY OF TEXTS:</td>
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<tr>
<td>The submission exhibits concrete evidence that research-based quantitative measures as well as qualitative analysis have been used in selection of complex texts that align to the standards. Further, submissions include a demonstrable staircase of text complexity as materials progress across grade bands.</td>
<td>1a) 100% of texts must be accompanied by specific evidence that they have been analyzed with at least one research-based quantitative measure for grade-band placement. 1b) 100% of texts must be accompanied by specific evidence that they have been analyzed for their qualitative features indicating a specific grade-level placement. 1c) Texts for each grade band align with the complexity requirements outlined in the standards. Rare exceptions (in which the qualitative measure has trumped the quantitative measure and placed the text outside the grade band) are usually reserved for literary texts in the upper grades, with clear explanation offered. 1d) Shorter, challenging texts that elicit close reading and multiple readings for varied purposes are provided regularly at each grade. 1e) All students have extensive opportunity to encounter and</td>
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<tr>
<td>Comprehend grade-level text.</td>
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<tr>
<td>Non-Negotiable 2. RANGE OF TEXTS: Materials must reflect the distribution of text types and genres required by the standards.</td>
<td>2a) In grades 3-5, literacy programs shift the balance of texts and instructional time to 50% literature / 50% informational high-quality text. In grades 6-12, ELA programs shift the balance of texts and instructional time towards reading substantially more literary nonfiction. 2b) A large majority of texts included in instructional materials reflect the genres and text characteristics that are specifically required by the standards at each grade level. 2c) Materials pay careful attention to providing a sequence or collection of texts that build knowledge systematically through reading, writing, listening and speaking about topics under study. 2d) Within a sequence or collection of texts, specific anchor texts of grade-level complexity (keystone texts) are selected for especially careful reading. 2e) Additional materials markedly increase the opportunity for regular independent reading of texts that appeal to students' interests to develop both knowledge and love of reading.</td>
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<td><strong>Non-Negotiable 3. QUALITY OF TEXTS:</strong> The quality of texts is high—they are worth reading closely and exhibit exceptional craft and thought and/or provide useful information.</td>
<td><strong>3a</strong>) 100% of texts must be worth reading; they must be content rich and well crafted, representing the best available writing in their genre and subject matter. <strong>3b</strong>) 100% of history/social studies and science/technical selections, specifically, must enable students to develop rich content knowledge and reflect the quality of writing that is produced by authorities in the discipline, appropriately calibrated for students in that band level. <strong>3c</strong>) 50% or more of informational texts must use informational text structures rather than narrative structures, while still following the distribution of subject matter in non-negotiable 2.</td>
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<td><strong>II. Questions and Tasks</strong></td>
<td>4a) Text-dependent questions and tasks reflect the requirements of Reading Standard 1 by requiring use of textual evidence, including supporting valid inferences from the text. 4b) High-quality sequences of text-dependent questions elicit sustained attention to the specifics of the text and their impact. 4c) Questions and tasks assess the depth and complexity of the analytical thinking required by the standards at each grade-level (Note: not every standard must be assessed with every text.) 4d) Questions and tasks support students in unpacking the academic language (vocabulary and syntax) prevalent in complex texts.</td>
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<tr>
<td><strong>Non-Negotiable 4. TEXT-DEPENDENT AND TEXT-SPECIFIC QUESTIONS:</strong> At least 80% of all questions in the submission are high-quality text-dependent and text-specific questions. The overwhelming majority of these questions are text specific and draw student attention to the particulars in the text.</td>
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</tr>
<tr>
<td><strong>Non-Negotiable 5. SCAFFOLDING AND SUPPORTS:</strong> The submission provides all students, including those who read below grade level, with extensive opportunities to encounter and comprehend grade-level complex text as required by the standards. Materials direct teachers to return to focused parts of the text to guide students through rereading, discussion and writing about the ideas, events, and information found there. This opportunity is offered regularly and 5a) Significant pre-reading activities and suggested approaches to teacher scaffolding are highly focused and begin with the text itself. Pre-reading activities should be no more than 10% of time devoted to any reading instruction. 5b) Materials cannot confuse or substitute mastery of strategies for full comprehension of complex text. Reading strategies have to support comprehension of specific texts and focus on building knowledge and insight. Texts must not serve as platforms to practice discrete strategies. 5c) Questions and tasks require careful comprehension of the text as a precursor for asking students for evaluation or interpretation. 5d) Questions and tasks that address academic language (vocabulary and syntax) support students in unpacking the</td>
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</tr>
</tbody>
</table>
| systematically. | meaning of complex texts.  
**5e)** Materials offer assessment opportunities that genuinely measure progress. Progress must include gradual release of supporting scaffolds for students to measure their independent abilities. |  |  |  |
### Section I: Non-Negotiable Criteria

<table>
<thead>
<tr>
<th>NON-NEGOTIABLE CRITERIA FOR ALIGNMENT TO CCSS</th>
<th>METRICS</th>
<th>MEETS METRICS (Y/N)</th>
<th>JUSTIFICATION/ COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>III. Foundational Skills (grades 3-5 only)</td>
<td>6a)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Negotiable 6. FOUNDATIONAL SKILLS (grades 3-5 only): Materials provide explicit and systematic instruction and diagnostic support in concepts of print, phonics, vocabulary, development, syntax, and fluency. These foundational skills are necessary and central components of an effective, comprehensive reading program designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines.</td>
<td>6b)</td>
<td></td>
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</tr>
<tr>
<td>6a) Materials demand knowledge of grade-level phonics and word analysis skills.</td>
<td>6b)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6b) Materials encourage students to use context to confirm or self-correct word recognition and understanding, directing students to reread purposefully to acquire accurate meaning.</td>
<td>6c)</td>
<td></td>
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</tr>
<tr>
<td>6c) Materials provide instruction and practice in word study, including systematic examination of grade-level morphology, decoding of multisyllabic words by using syllabication, and automaticity with grade-level regular and irregular spelling patterns.</td>
<td>6d)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6d) Opportunities are frequently built into the materials that allow for students to achieve reading fluency in oral and silent reading, that is, to read on-level prose and poetry with accuracy, rate appropriate to the text, and expression.</td>
<td>6e)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6e) Materials guide students to read grade-level text with purpose and understanding.</td>
<td>6e)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Section I: Non-Negotiable Criteria

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>IV. Writing to Sources and Research</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Negotiable 7. WRITING TO SOURCES:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written and oral tasks at all grade levels</td>
<td></td>
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</tr>
<tr>
<td>require students to confront the text</td>
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<tr>
<td>directly, to draw on textual evidence, and</td>
<td></td>
<td></td>
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<tr>
<td>to support valid inferences from the text.</td>
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</tr>
<tr>
<td>7a) Writing to sources is a key task. Students are asked in their writing to analyze and synthesize sources, as well as to present careful analysis, well-defended claims and clear information.</td>
<td></td>
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</tr>
<tr>
<td>7b) Materials place an increased focus on argument and informative writing in the following proportions. Alternately, they may reflect blended forms in similar proportions (e.g. exposition and persuasion).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grades 3-5</td>
<td>exposition 35%</td>
<td>persuasion 30%</td>
<td>narrative 35%</td>
</tr>
<tr>
<td>Grades 6-8</td>
<td>exposition 35%</td>
<td>argument 35%</td>
<td>narrative 30%</td>
</tr>
<tr>
<td>High School</td>
<td>exposition 40%</td>
<td>argument 40%</td>
<td>narrative 20%</td>
</tr>
<tr>
<td>7c) Writing opportunities for students are prominent and varied.</td>
<td></td>
<td></td>
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<tr>
<td>7d) Extensive practice with short, focused research projects is provided. Materials require students to engage in many short research projects annually to enable students to develop the expertise needed to conduct research independently.</td>
<td></td>
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</tbody>
</table>
### Section I: Non-Negotiable Criteria

<table>
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<tr>
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<th>JUSTIFICATION/COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>V. Speaking and Listening</td>
<td></td>
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</tbody>
</table>

**Non-Negotiable 8: SPEAKING AND LISTENING:**
To be CCSS-aligned, items assessing speaking and listening must reflect true communication skills required for college and career readiness.

- **8a)** Texts used in speaking and listening questions and tasks must meet the criteria for complexity, range, and quality of texts (non-negotiables 1, 2, and 3).
- **8b)** Materials demand that students engage effectively in a range of conversations and collaborations by expressing well-supported ideas clearly and probing ideas under discussion by building on others' ideas.
- **8c)** Materials develop active listening skills, such as taking notes on main ideas, asking relevant questions, and elaborating on remarks of others.
- **8d)** Materials require students to marshal evidence to orally present findings from research.
- **8e)** Materials build in frequent opportunities for discussion and, through directions and modeling, encourage students to use academic language.
### Section I: Non-Negotiable Criteria

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<tr>
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</thead>
<tbody>
<tr>
<td>VI. Language</td>
<td></td>
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</tr>
<tr>
<td>Non-Negotiable 9: LANGUAGE:</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Materials must adequately address the Language standards for the grade.</td>
<td>9a) Materials address the grammar and language conventions specified by the Language standards at each grade level.</td>
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<td></td>
<td>9b) Materials provide a mirror of real-world activities for student practice with natural language (e.g. mock interviews, presentations).</td>
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<tr>
<td></td>
<td>9c) Materials expect students to confront their own error patterns in usage and conventions and correct them in a grade-by-grade pathway that results in college and career readiness by 12th grade.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Section II: Indicators of Superior Quality

<table>
<thead>
<tr>
<th>Indicator of Superior Quality</th>
<th>MEETS METRICS (Y/N)</th>
<th>JUSTIFICATION/COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VIII. Usefulness, Design, and Focus</strong></td>
<td></td>
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</tr>
<tr>
<td>Do the student resources include ample review and practice resources, clear directions and explanations, and correct labeling of reference aids (e.g., visuals, maps, etc.)?</td>
<td></td>
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</tr>
<tr>
<td>Are the material easy to use, are they cleanly laid out for students and teachers? Does every page of the submission add to student learning rather than distract from it? Are reading selections centrally located within the materials and obviously the center of focus?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are there suggestions and materials for adapting instruction for varying student needs? (e.g., alternative teaching approaches, pacing, instructional delivery options, suggestions for addressing common student difficulties, remediation strategies)</td>
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</tr>
<tr>
<td>Can the teacher and student reasonably complete the content presented within a regular school year and does the pacing of content allow for maximum student understanding? Do the materials provide clear guidance to teachers about the amount of time the lesson might reasonably take?</td>
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<tr>
<td>Do instructions allow for careful reading and rereading of content?</td>
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<tr>
<td>Do the materials contain clear statements and explanation of purpose, goals, and expected outcomes?</td>
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</tbody>
</table>
EQuIP Quality Review Rubric

- Mathematics ........................................................................................................................................ III-40
- English Language Arts/Literacy, Grades K–2 .................................................................................. III-42
- English Language Arts/Literacy (Grades 3–5) and English Language Arts (Grades 6–12) ........ III-44
<table>
<thead>
<tr>
<th>I. Alignment to the Depth of the CCSS</th>
<th>II. Key Shifts in the CCSS</th>
<th>III. Instructional Supports</th>
<th>IV. Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>The lesson/unit aligns with the letter and spirit of the CCSS:</td>
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<tr>
<td>Focus: Lessons and units targeting the major work of the grade provide an especially in-depth treatment, with especially high expectations. Lessons and units targeting supporting work of the grade have visible connection to the major work of the grade and are sufficiently brief. Lessons and units do not hold students responsible for material from later grades.</td>
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<tr>
<td>Coherence: The content develops through reasoning about the new concepts on the basis of previous understandings. Where appropriate, provides opportunities for students to connect knowledge and skills within or across clusters, domains and learning progressions.</td>
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<tr>
<td>Rigor: Requires students to engage with and demonstrate challenging mathematics with appropriate balance among the following:</td>
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<tr>
<td>Application: Provides opportunities for students to independently apply mathematical concepts in real-world situations and solve challenging problems with persistence, choosing and applying an appropriate model or strategy to new situations.</td>
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<tr>
<td>Conceptual Understanding: Develops students’ conceptual understanding through tasks, brief problems, questions, multiple representations and opportunities for students to write and speak about their understanding.</td>
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<tr>
<td>Procedural Skill and Fluency: Expects, supports and provides guidelines for procedural skill and fluency with core calculations and mathematical procedures (when called for in the standards for the grade) to be performed quickly and accurately.</td>
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<tr>
<td>The lesson/unit is responsive to varied student learning needs:</td>
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<tr>
<td>Includes clear and sufficient guidance to support teaching and learning of the targeted standards, including, when appropriate, the use of technology and media.</td>
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<tr>
<td>Uses and encourages precise and accurate mathematics, academic language, terminology and concrete or abstract representations (e.g., pictures, symbols, expressions, equations, graphics, models) in the discipline.</td>
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<tr>
<td>Engages students in productive struggle through relevant, thought-provoking questions, problems and tasks that stimulate interest and elicit mathematical thinking.</td>
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<tr>
<td>Addresses instructional expectations and is easy to understand and use.</td>
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<tr>
<td>Provides appropriate level and type of scaffolding, differentiation, intervention and support for a broad range of learners.</td>
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<tr>
<td>Supports diverse cultural and linguistic backgrounds, interests and styles.</td>
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<tr>
<td>Provides extra supports for students working below grade level.</td>
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<tr>
<td>Provides extensions for students with high interest or working above grade level.</td>
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<tr>
<td>A unit or longer lesson should:</td>
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</tr>
<tr>
<td>Recommend and facilitate a mix of instructional approaches for a variety of learners such as using multiple representations (e.g., including models, using a range of questions, checking for understanding, flexible grouping, pair-share).</td>
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<tr>
<td>Gradually remove supports, requiring students to demonstrate their mathematical understanding independently.</td>
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<tr>
<td>Demonstrate an effective sequence and a progression of learning where the concepts or skills advance and deepen over time.</td>
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</tr>
<tr>
<td>Expect, support and provide guidelines for procedural skill and fluency with core calculations and mathematical procedures (when called for in the standards for the grade) to be performed quickly and accurately.</td>
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</tr>
<tr>
<td>The lesson/unit regularly assesses whether students are mastering standards-based content and skills:</td>
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<tr>
<td>Is designed to elicit direct, observable evidence of the degree to which a student can independently demonstrate the targeted CCSS.</td>
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<tr>
<td>Assesses student proficiency using methods that are accessible and unbiased, including the use of grade-level language in student prompts.</td>
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<tr>
<td>Includes aligned rubrics, answer keys and scoring guidelines that provide sufficient guidance for interpreting student performance.</td>
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</tbody>
</table>

Rating: 3 2 1 0

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The EQuIP rubric is derived from the Tri-State Rubric and the collaborative development process led by Massachusetts, New York, and Rhode Island and facilitated by Achieve. This version of the EQuIP rubric is current as of 06-15-13. View Creative Commons Attribution 3.0 Unported License at http://creativecommons.org/licenses/by/3.0/. Educators may use or adapt. If modified, please attribute EQuIP and re-title.
**EQuIP Rubric for Lessons & Units: Mathematics**

**Directions:** The Quality Review Rubric provides criteria to determine the quality and alignment of lessons and units to the Common Core State Standards (CCSS) in order to: (1) Identify exemplars/models for teachers’ use within and across states; (2) provide constructive criteria-based feedback to developers; and (3) review existing instructional materials to determine what revisions are needed.

**Step 1 – Review Materials**
- Identify the grade-level CCSS that the lesson/unit targets.
- Closely examine the materials through the “lens” of each criterion.
- Individually check each criterion for which clear and substantial evidence is found.
- Identify and record input on specific improvements that might be made to meet criteria or strengthen alignment.
- Enter your rating 0 – 3 for Dimension I: Alignment.

**Step 2 – Apply Criteria in Dimension I: Alignment**
- Review ratings for Dimensions I – IV adding/clarifying comments as needed.
- Write summary comments for your overall rating on your recording sheet.
- Total dimension ratings and record overall rating E, E/I, R, N – adjust as necessary.

When working in a group, individuals may choose to compare ratings after each dimension or delay conversation until each person has rated and recorded their input for the remaining Dimensions II – IV.

**Step 4 – Apply an Overall Rating and Provide Summary Comments**
- Review ratings for Dimensions I – IV adding/clarifying comments as needed.
- Write summary comments for your overall rating on your recording sheet.
- Total dimension ratings and record overall rating E, E/I, R, N – adjust as necessary.

If working in a group, individuals should record their overall rating prior to conversation.

**Step 5 – Compare Overall Ratings and Determine Next Steps**
- Note the evidence cited to arrive at final ratings, summary comments and similarities and differences among raters. Recommend next steps for the lesson/unit and provide recommendations for improvement and/or ratings to developers/teachers.

**Additional Guidance on Dimension II: Shifts**
- When considering Focus it is important that lessons or units targeting additional and supporting clusters are sufficiently brief – this ensures that students will spend the strong majority of the year on major work of the grade. See the K-8 Publishers Criteria for the Common Core State Standards in Mathematics, particularly pages 8-9 for further information on the focus criterion with respect to major work of the grade at www.corestandards.org/assets/Math_Publishers_Criteria_K-8_Summer%202012_FINAL.pdf. With respect to Coherence it is important that the learning objectives are linked to CCSS cluster headings (see www.corestandards.org/Math).

**Rating Scales**

**Rating Scale for Dimensions I, II, III, IV:**
1. Meets some of the criteria in the dimension
2. Meets many of the criteria in the dimension
3. Meets most of the criteria in the dimension
4. Meets all of the criteria in the dimension
0: Does not meet the criteria in the dimension

**Descriptors for Dimensions I, II, III, IV:**
- Describing CCSS Quality - meets the standard described by criteria in the dimension, as explained in criterion-based observations.
- Approaching CCSS Quality - meets many criteria but will benefit from revision in others, as suggested in criterion-based observations.
- Developing toward CCSS Quality - needs significant revision, as suggested in criterion-based observations.
- Not representing CCSS Quality - does not address the criteria in the dimension.

**Overall Rating for the Lesson/Unit:**
- E: Exemplar –aligned and meets most to all of the criteria in dimensions II, III, IV (total 11 – 12)
- E/I: Exemplar if Improved – Aligned and needs some improvement in one or more dimensions (total 8 – 10)
- R: Revision Needed – Aligned partially and needs significant revision in one or more dimensions (total 3 – 7)
- N: Not Ready to Review – Not aligned and does not meet criteria (total 0 – 2)

**Descriptor for Overall Ratings:**
- E: Exemplifies CCSS Quality – Aligned and exemplifies the quality standard and exemplifies most of the criteria across Dimensions II, III, IV of the rubric.
- E/I: Approaching CCSS Quality – Aligned and exemplifies the quality standard in some dimensions but will benefit from some revision in others.
- R: Developing toward CCSS Quality – Aligned partially and approaches the quality standard in some dimensions and needs significant revision in others.
- N: Not representing CCSS Quality – Not aligned and does not address criteria.
### EQuIP Rubric for Lessons & Units: ELA/Literacy Grades K-2

**Grade:** Literacy Lesson/Unit Title:  

<table>
<thead>
<tr>
<th>I. Alignment to the Depth of the CCSS</th>
<th>II. Key Shifts in the CCSS</th>
<th>III. Instructional Supports</th>
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</tr>
</thead>
<tbody>
<tr>
<td>The lesson/unit aligns with the letter and spirit of the CCSS:</td>
<td>The lesson/unit addresses key shifts in the CCSS:</td>
<td>The lesson/unit is responsive to varied student learning needs:</td>
<td>The lesson/unit regularly assesses whether students are developing standards-based skills:</td>
</tr>
<tr>
<td>o Targets a set of K-2 ELA/Literacy CCSS for teaching and learning.</td>
<td>o Reading Text Closely: Makes reading text(s) closely (including read alouds) a central focus of instruction and includes regular opportunities for students to ask and answer text-dependent questions.</td>
<td>o Cultivates student interest and engagement in reading, writing and speaking about texts.</td>
<td>o Elicits direct, observable evidence of the degree to which a student can independently demonstrate foundational skills and targeted grade level literacy CCSS (e.g., reading, writing, speaking and listening and/or language).</td>
</tr>
<tr>
<td>o Includes a clear and explicit purpose for instruction.</td>
<td>o Text-Based Evidence: Facilitates rich text-based discussions and writing through specific, thought-provoking questions about common texts (including read alouds and, when applicable, illustrations, audio/video and other media).</td>
<td>o Addresses instructional expectations and is easy to understand and use for teachers (e.g., clear directions, sample proficient student responses, sections that build teacher understanding of the why's and how of the material).</td>
<td>o Assesses student proficiency using methods that are unbiased and accessible to all students.</td>
</tr>
<tr>
<td>o Selects quality text(s) that align with the requirements outlined in the standards, presents characteristics similar to CCSS K-2 exemplars (Appendix B), and are of sufficient scope for the stated purpose.</td>
<td>o Academic Vocabulary: Focusses on explicitly building students' academic vocabulary and concepts of syntax throughout instruction.</td>
<td>o Integrates targeted instruction in multiple areas such as grammar and syntax, writing strategies, discussion rules and aspects of foundational reading.</td>
<td>o Includes aligned rubrics or assessment guidelines that provide sufficient guidance for interpreting student performance and responding to areas where students are not yet meeting standards.</td>
</tr>
<tr>
<td>o Provides opportunities for students to present ideas and information through writing and/or drawing and speaking experiences.</td>
<td>A unit or longer lesson should:</td>
<td>o Provides substantial materials to support students who need more time and attention to achieve automaticity with decoding, phonemic awareness, fluency and/or vocabulary acquisition.</td>
<td>A unit or longer lesson should:</td>
</tr>
<tr>
<td>A unit or longer lesson should:</td>
<td>o Emphasize the explicit, systematic development of foundational literacy skills (concepts of print, phonological awareness, the alphabetic principal, high frequency sight words, and phonics).</td>
<td>o Provides all students (including emergent and beginning readers) with extensive opportunities to engage with grade-level texts and read alouds that are at high levels of complexity including appropriate scaffolding so that students directly experience the complexity of text.</td>
<td>o Use varied modes of assessment, including a range of pre-, formative, summative and self-assessment measures.</td>
</tr>
<tr>
<td>o Regularly include specific fluency-building techniques supported by research (e.g., monitored partner reading, choral reading, repeated readings with text, following along in the text when teacher or other fluent reader is reading aloud, short timed practice that is slightly challenging to the reader).</td>
<td>o Grade-Level Reading: Include a progression of texts as students learn to read (e.g., additional phonic patterns are introduced, increasing sentence length). Provides text-centered learning that is sequenced, scaffolded and supported to advance students toward independent grade-level reading.</td>
<td>o Focuses on sections of rich text(s) (including read alouds) that present the greatest challenge; provides discussion questions and other supports to promote student engagement, understanding and progress toward independence.</td>
<td></td>
</tr>
<tr>
<td>o Integrate reading, writing, speaking and listening so that students apply and synthesize advancing literacy skills.</td>
<td>o Balance of Texts: Focus instruction equally on literacy and informational texts as stipulated in the CCSS (p.5) and indicated by instructional time (may be more applicable across a year or several units).</td>
<td>o Integrates appropriate, extensive and easily implemented supports for students who are ELL, have disabilities and/or read or write below grade level.</td>
<td></td>
</tr>
<tr>
<td>o Build students' content knowledge in social studies, the arts, science or technical subjects through a coherent sequence of texts and series of questions that build knowledge within a topic.</td>
<td>o Balance of Writing: Include prominent and varied writing opportunities for students that balance communicating thinking and answering questions with self-expression and exploration.</td>
<td>o Provides extensions and/or more advanced text for students who read or write above grade level.</td>
<td></td>
</tr>
</tbody>
</table>

**Rating:** 3 2 1 0

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**This version of the EQuIP rubric is current as of 06-24-13.**

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EQuIP Rubric for Lessons & Units: ELA/Literacy Grades K-2

Directions: The Quality Review Rubric provides criteria to determine the quality and alignment of lessons and units to the Common Core State Standards (CCSS) in order to: (1) Identify exemplars/models for teachers’ use within and across states; (2) provide constructive criteria-based feedback to developers; and (3) review existing instructional materials to determine what revisions are needed.

Step 1 – Review Materials
- Record the grade and title of the lesson/unit on the recording form.
- Scan to see what the lesson/unit contains and how it is organized.
- Read key materials related to instruction, assessment and teacher guidance.
- Study and measure the text(s) that serves as the centerpiece for the lesson/unit, analyzing text complexity, quality, scope, and relationship to instruction.

Step 2 – Apply Criteria in Dimension I: Alignment
- Identify the grade-level CCSS that the lesson/unit targets.
- Closely examine the materials through the “lens” of each criterion.
- Individually check each criterion for which clear and substantial evidence is found.
- Identify and record input on specific improvements that might be made to meet criteria or strengthen alignment.
- Enter your rating 0 – 3 for Dimension I: Alignment

Note: Dimension I is non-negotiable. In order for the review to continue, a rating of 2 or 3 is required. If the review is discontinued, consider general feedback that might be given to developers/teachers regarding next steps.

Step 3 – Apply Criteria in Dimensions II – IV
- Closely examine the lesson/unit through the “lens” of each criterion.
- Record comments on criteria met, improvements needed and then rate 0 – 3.

When working in a group, individuals may choose to compare ratings after each dimension or delay conversation until each person has rated and recorded their input for the remaining Dimensions II – IV.

Step 4 – Apply an Overall Rating and Provide Summary Comments
- Review ratings for Dimensions I – IV adding/clarifying comments as needed.
- Write summary comments for your overall rating on your recording sheet.
- Total dimension ratings and record overall rating E, E/I, R, N – adjust as necessary.

If working in a group, individuals should record their overall rating prior to conversation.

Step 5 – Compare Overall Ratings and Determine Next Steps
- Note the evidence cited to arrive at final ratings, summary comments and similarities and differences among raters. Recommend next steps for the lesson/unit and provide recommendations for improvement and/or ratings to developers/teachers.

Additional Guidance for ELA/Literacy – When selecting text(s) that measure within the grade-level or text complexity band and are of sufficient quality and scope for the stated purpose, see The Common Core State Standards in English Language Arts/Literacy at www.corestandards.org/ELA-Literacy; and the Supplement for Appendix A: New Research on Text Complexity as well as Quantitative and Qualitative Measures at www.achievethecore.org/steal-these-tools/text-complexity. See The Publishers’ Criteria for Grades K-2 and the same for Grades 3-12 at www.achievethecore.org/steal-these-tools.

Rating Scales

Note: Rating for Dimension I: Alignment is non-negotiable and requires a rating of 2 or 3. If rating is 0 or 1 then the review does not continue.

Rating Scale for Dimensions I, II, III, IV:
1: Meets some of the criteria in the dimension
0: Does not meet the criteria in the dimension

Descriptors for Dimensions I, II, III, IV:
3: Exemplifies CCSS Quality – meets the standard described by criteria in the dimension, as explained in criterion-based observations.
2: Approaching CCSS Quality – meets many criteria but will benefit from revision in others, as suggested in criterion-based observations.
1: Developing toward CCSS Quality – needs significant revision, as suggested in criterion-based observations.
0: Not representing CCSS Quality – does not address the criteria in the dimension.

Overall Rating for the Lesson/Unit:
E: Exemplar – Aligned and meets most to all of the criteria in dimensions II, III, IV (total 11 – 12)
E/I: Exemplar / Improved – Aligned and needs some improvement in one or more dimensions (total 8 – 10)
R: Revision Needed – Aligned partially and needs significant revision in one or more dimensions (total 3 – 7)
N: Not Ready to Review – Not aligned and does not meet criteria (total 0 – 2)

Descriptors for Overall Rating:
E: Exemplifies CCSS Quality – Aligned and exemplifies the quality standard and exemplifies most of the criteria across Dimensions II, III, IV of the rubric.
E/I: Approaching CCSS Quality – Aligned and exemplifies the quality standard in some dimensions but will benefit from some revision in others.
R: Developing toward CCSS Quality – Aligned partially and approaches the quality standard in some dimensions and needs significant revision in others.
N: Not representing CCSS Quality – Not aligned and does not address criteria.
A unit or longer lesson should:

- **I. Alignment to the Depth of the CCSS**
  - The lesson/unit addresses key shifts in the CCSS:
    - **Reading Text Closely:** Makes reading text(s) closely, examining textual evidence, and discerning deep meaning a central focus of instruction.
    - **Text-Based Evidence:** Facilitates rich and rigorous evidence-based discussions and writing about common texts through a sequence of specific, thought-provoking, and text-dependent questions (including, when applicable, questions about illustrations, charts, diagrams, audio/video, and media).
    - **Writing from Sources:** Routinely expects that students draw evidence from texts to produce clear and coherent writing that informs, explains, or makes an argument in various written forms (e.g., notes, summaries, short responses, or formal essays).
    - **Academic Vocabulary:** Focuses on building students’ academic vocabulary in context throughout instruction.

- **II. Key Shifts in the CCSS**
  - The lesson/unit aligns with the letter and spirit of the CCSS:
    - Targets a set of grade-level CCSS ELA/Literacy standards.
    - Includes a clear and explicit purpose for instruction.
    - Selects text(s) that measure within the grade-level text complexity band and are of sufficient quality and scope for the stated purpose (e.g., presents vocabulary, syntax, text structures, levels of meaning/purpose, and other qualitative characteristics similar to CCSS grade-level exemplars in Appendices A & B).

- **III. Instructional Supports**
  - A unit or longer lesson should:
    - Integrate reading, writing, speaking and listening so that students apply and synthesize advancing literacy skills.
    - (Grades 3-5) Build students’ content knowledge and their understanding of reading and writing in social studies, the arts, science or technical subjects through the coherent selection of texts.
    - Gradually remove supports, requiring students to demonstrate their understanding of text(s).

- **IV. Assessment**
  - The lesson/unit is responsive to varied student learning needs:
    - Cultivates student interest and engagement in reading, writing and speaking about texts.
    - Addresses instructional expectations and is easy to understand and use.
    - Provides all students with multiple opportunities to engage with text of appropriate complexity for the grade level; includes appropriate scaffolding so that students directly experience the complexity of the text.
    - Focuses on challenging sections of text(s) and engages students in a productive struggle through discussion questions and other supports that build toward independence.
    - Integrates appropriate supports in reading, writing, listening and speaking for students who are ELL, have disabilities, or read well below the grade level text band.
    - Provides extensions and/or more advanced text for students who read well above the grade level text band.

- **Overall Rating:**
  - The lesson/unit regularly assesses whether students are mastering standards-based content and skills:
    - Elicits direct, observable evidence of the degree to which a student can independently demonstrate the major targeted grade-level CCSS standards with appropriately complex text(s).
    - Includes aligned rubrics or assessment guidelines that provide sufficient guidance for interpreting student performance.

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The EQuIP rubric is derived from the Tri-State Rubric and the collaborative development process led by Massachusetts, New York, and Rhode Island and facilitated by Achieve.

This version of the EQuIP rubric is current as of 06-24-13.

View Creative Commons Attribution 3.0 Unported License at [http://creativecommons.org/licenses/by/3.0/](http://creativecommons.org/licenses/by/3.0/). Educators may use or adapt. If modified, please attribute EQuIP and re-title.
**EQuIP Rubric for Lessons & Units: ELA/Literacy (Grades 3-5) and ELA (Grades 6-12)**

**Directions:** The Quality Review Rubric provides criteria to determine the quality and alignment of lessons and units to the Common Core State Standards (CCSS) in order to: (1) identify exemplars/ models for teachers’ use within and across states; (2) provide constructive criteria-based feedback to developers; and (3) review existing instructional materials to determine what revisions are needed.

**Step 1 – Review Materials**
- Record the grade and title of the lesson/unit on the recording form.
- Scan to see what the lesson/unit contains and how it is organized.
- Read key materials related to instruction, assessment and teacher guidance.
- Study and measure the text(s) that serves as the centerpiece for the lesson/unit, analyzing text complexity, quality, scope, and relationship to instruction.

**Step 2 – Apply Criteria in Dimension I: Alignment**
- Identify the grade-level CCSS that the lesson/unit targets.
- Closely examine the materials through the “lens” of each criterion.
- Individually check each criterion for which clear and substantial evidence is found.
- Identify and record input on specific improvements that might be made to meet criteria or strengthen alignment.
- Enter your rating 0 – 3 for Dimension I: Alignment

*Note: Dimension I is non-negotiable. In order for the review to continue, a rating of 2 or 3 is required. If the review is discontinued, consider general feedback that might be given to developers/teachers regarding next steps.*

**Step 3 – Apply Criteria in Dimensions II – IV**
- Closely examine the lesson/unit through the “lens” of each criterion.
- Review ratings on criteria met, improvements needed and then rate 0 – 3.
- When working in a group, individuals may choose to compare ratings after each dimension or delay conversation until each person has rated and recorded their input for the remaining Dimensions II – IV.

**Step 4 – Apply an Overall Rating and Provide Summary Comments**
- Review ratings for Dimensions I – IV adding/clarifying comments as needed.
- Write summary comments for your overall rating on your recording sheet.
- Total dimension ratings and record overall rating E, E/I, R, N – adjust as necessary.

*If working in a group, individuals should record their overall rating prior to conversation.*

**Step 5 – Compare Overall Ratings and Determine Next Steps**
- Note the evidence cited to arrive at final ratings, summary comments and similarities and differences among raters. Recommend next steps for the lesson/unit and provide recommendations for improvement and/or ratings to developers/teachers.

**Additional Guidance for ELA/Literacy** – When selecting text(s) that measure within the grade-level text complexity band and are of sufficient quality and scope for the stated purpose, see the Common Core State Standards in English Language Arts/Literacy at [www.corestandards.org/ELA-Literacy](http://www.corestandards.org/ELA-Literacy) and the Supplement for Appendix A: New Research on Text Complexity as well as Quantitative and Qualitative Measures at [www.achievethecore.org/steal-these-tools/text-complexity](http://www.achievethecore.org/steal-these-tools/text-complexity). See The Publishers’ Criteria for Grades K-2 and the same for Grades 3-12 at [www.achievethecore.org/steal-these-tools](http://www.achievethecore.org/steal-these-tools).

**Rating Scales**

**Rating Scale for Dimensions I, II, III, IV:**
1: Meets most of all the criteria in the dimension  
2: Meets many of the criteria in the dimension  
3: Meets some of the criteria in the dimension  
0: Does not meet the criteria in the dimension

**Descriptors for Dimensions I, II, III, IV:**
1: Developing toward CCSS Quality – needs significant revision, as suggested in criterion-based observations.  
0: Not representing CCSS Quality – does not address the criteria in the dimension.

**Overall Rating for the Lesson/Unit:**
E: Exemplar – Aligned and meets most to all of the criteria in dimensions II, III, IV (total 11 – 12)  
E/I: Exemplar if Improved – Aligned and needs some improvement in one or more dimensions (total 8 – 10)  
R: Revision Needed – Aligned partially and needs significant revision in one or more dimensions (total 3 – 7)  
N: Not Ready to Review – Not aligned and does not meet criteria (total 0 – 2)

**Descriptors for Overall Rating:**
R: Developing toward CCSS Quality – Aligned partially and approaches the quality standard in some dimensions and needs significant revision in others.  
N: Not representing CCSS Quality – Not aligned and does not address criteria.
EQuIP Student Work Protocol

- Mathematics ........................................................................................................ III-46
- English Language Arts/Literacy ........................................................................ III-52
EQuIP Student Work Protocol

The protocol is intended for use with instructional materials that have undergone an EQuIP review, received an E or E/I rating, and then subsequently have been implemented in an instructional setting to produce samples of student work.

The ultimate goal of the Common Core State Standards (CCSS) is to prepare all students with the knowledge and skills they need for postsecondary success. The EQuIP Student Work Protocol is designed to establish or articulate the relationship between student work and the quality and alignment of instructional materials that have previously been reviewed using the EQuIP quality review process.

This 5-step protocol begins with a team of reviewers (or a single reviewer) focusing on the assignment itself—the directions or prompt and any accompanying scoring guides. The reviewers then analyze the standards actually targeted by the author of the lesson/unit and the content and performances embodied by the assignment. Reviewers then analyze the assignment itself—the directions or prompt and any accompanying scoring guides. Reviewers then determine how students performed on the assignment and whether they embodied the expectations and performances required by the assignment.

The specific objectives of this EQuIP Student Work Protocol are three-fold:

1. To confirm that a lesson or unit’s assignment is aligned with the letter and spirit of the targeted Common Core State Standards.
2. To determine how students performed on an assignment as evidence of how well designed the lesson/unit is.
3. To provide criterion-based suggestions for improving the assignment and related instructional materials.

Focusing on this relationship enables educators to develop a common understanding of the challenging work required by the CCSS. Furthermore, analyzing this relationship will also assist in closing the gap between what students are learning and the expectations embodied in assignments and performances required by the assignment.

Deepening the existing foundation for collaboration among states and districts, the ultimate goal of the Common Core State Standards will result in more equitable educational opportunities for students and what they have learned, remembered, and incorporated into their knowledge and skills.

The protocol is intended for use with instructional materials that have undergone an EQuIP review, received an E or E/I rating, and then subsequently have been implemented in an instructional setting to produce samples of student work.

Conclusion
This final step includes noting what should be kept, deleted and/or added to the content and performance demands of the assignment for tighter alignment with the targeted standards in the lesson/unit. If reviewers are part of a team, each step of this protocol is to be completed individually before the lesson/unit.

Guiding Questions:

- Based on the directions and/or the scoring guides for the assignment, what is its likely purpose?
- Based on the directions and/or the scoring guides for the assignment, what are the demands on the student?

Step 2: Without consulting the standards, analyze the assignment as evidenced by the directions and the rubrics/scoring guides.

Steps for the EQaP Student Work Protocol – Mathematics:

1. Scan the lesson/unit to see what it contains and how it is organized.
2. Locate the student work that corresponds to the assignment.
3. Locate the assignment title or record the assignment title or description on the recording form.
4. Record the grade and title of the lesson/unit.

Note: Reviewers should limit observations to what the assignment and rubrics communicate about the purpose and demands of the assignment. Reviewers will consult the standards in Step 3 after the purpose and demands of the assignment are evidenced by the directions and the rubrics/scoring guides.
STEP 3: Compare the alignment of the content and performance(s) of the assignment to the targeted standards for the assignment or lesson/unit.

Guiding Questions:

- Do the directions, prompt(s), and/or scoring guide for the assignment give students the opportunity to demonstrate all or part of the targeted standards for the assignment and lesson/unit?
- How well aligned are the content and performance(s) of the assignment with the targeted standards in the lesson/unit?

While it is important to rate the assignment against every targeted standard that the assignment targets, an assignment need not address every targeted standard in the lesson/unit as long as the assignment is central to the learning goals. In making suggestions for improvement, consider whether the assignment was intended to incorporate all of the targeted standards in the lesson/unit. Whether every targeted standard in the lesson/unit need not address every targeted standard in the lesson/unit as long as the assignment is central to the learning goals.

Content Required (Knowledge):

Performance Required (Skills):

Notes & Observations:
If the assignment is given a score of 1 or 0 for any one of the targeted standards, is there another assignment in the lesson/unit that addresses that standard?

Note: For any score of 1 or 0, note the gaps in the demands. Record important points concerning alignment (such as partial or cursory alignment as well as examples of strong alignment).

If another assignment is given a score of 1 or 0 for any one of the targeted standards, is there another assignment in the lesson/unit that addresses that standard?

<table>
<thead>
<tr>
<th>Alignment Rationale</th>
<th>Targeted CCSS Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alignment Rating (0-3)</td>
<td></td>
</tr>
</tbody>
</table>

**Task Description:**

Rate the alignment to each targeted standard using the 0-3 scale provided.

**Task-to-CCSS Alignment Recording Chart**

<table>
<thead>
<tr>
<th>Alignment of Task with the Targeted Standard(s)</th>
<th>Alignment Rating (0-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>3</td>
</tr>
<tr>
<td>Strong</td>
<td>2</td>
</tr>
<tr>
<td>Weak</td>
<td>1</td>
</tr>
<tr>
<td>No Alignment</td>
<td>0</td>
</tr>
</tbody>
</table>

The assignment demands do not match the identified standard(s).

If targets have not been identified for the assignment, rate alignment for standards identified as a target for the lesson/unit.

The assignment demands are clearly consistent with all aspects of the identified standard(s).

The assignment demands are consistent with the most critical aspects addressed in the standard(s).

Some of the less critical aspects of the identified standard(s) may not be addressed (likely by design).

Some of the less critical aspects addressed in the assignment, however, some of the less critical aspects of the identified standard(s) are NOT addressed in the assignment. However, some of the less critical aspects of the identified standard(s) are NOT addressed in the assignment. However, some of the less critical aspects of the identified standard(s) are NOT addressed in the assignment.

This ranking is used for a partial match when the most critical aspects addressed in the assignment are clearly consistent with all aspects of the identified standard(s).

This ranking is used for a partial match when the assignment is consistent with the most critical aspects addressed in the assignment.

This ranking is used for a partial match when the assignment is consistent with the most critical aspects addressed in the assignment.

The assignment demands are consistent with the most critical aspects addressed in the assignment.

The assignment demands are consistent with the most critical aspects addressed in the assignment.

The assignment demands are consistent with the most critical aspects addressed in the assignment.

The assignment demands do not match the identified standard(s).
III-50

5

Notes & Observations

Gaps in Alignment:

STEP 4: Diagnose student work.

Guiding Questions:
• What are the most frequent and fundamental problems students appear to be having with the assignment?
• What are the most frequent and fundamental successes students appear to be having?
• What does the collection of student work communicate about the kind and level of skills and knowledge students have learned and still need to learn?

Gaps in Alignment:

Notes & Observations
**Guiding Questions:**

- How could the assignment be strengthened to promote active problem-solving?
- How effective was the scoring rubric in communicating the criteria for the assignment?
- How does the review of student work suggest what needs to be kept, deleted, and added to the assignment?
- How does the review of student work suggest what needs to be kept, deleted, and added to the lesson/unit?
- How does the review of student work suggest what needs to be kept, deleted, and added to the rubrics/scoring guides?
- How could the assignment be strengthened to promote active problem-solving, reasoning, and critical thinking (the Standards for Mathematical Practice)?

**Suggested Improvements:**

- Add more examples to the assignment.
- Refine the rubrics to better align with the expectations.
- Include more feedback for students.
- Add more assessment opportunities.
The ultimate goal of the Common Core State Standards (CCSS) is to prepare all students with the knowledge and skills they need for postsecondary success. The EQuIP Student Work Protocol, designed to establish or articulate the relationship between student work and the quality and alignment of instructional materials that have undergone an EQuip review, assists in this process by focusing on the alignment of what students are learning with the expectations embodied in the CCSS. The protocol is intended for use with instructional materials that have undergone an EQuip Review, received a rating of E or E/I, and then subsequently have been implemented in instructional settings to produce samples of student work.

Introduction

The specific objectives of this EQuIP Student Work Protocol are three-fold:

1. To confirm that a lesson or unit's assignment is aligned with the letter and spirit of the targeted Common Core State Standards.
2. To determine how students performed on the assignment, as evidence of how well designed the lesson/unit is.
3. To provide criterion-based suggestions for improving the assignment and related instructional materials.

This 5-step protocol begins with a team of reviewers (or a single reviewer) focusing on the assignment itself – the directions or prompt and any accompanying scoring guides. Reviewers identify the content and performances required by the assignment and then analyze the standards actually targeted by the author of the lesson/unit and the content and performances standards actually targeted by the author of the lesson/unit and the content and performances standards actualy targeted by the author of the lesson/unit.

By focusing on this relationship, educators can develop a common understanding of the challenging work required by the CCSS. Furthermore, analyzing this relationship will also assist in closing the gap between what students are learning and the expectations embodied in the CCSS, ensuring that students are learning and retaining the knowledge and skills they need for postsecondary success.

The protocol is designed to enhance educators' ability to interpret the relationships between student work and the standards, enabling them to make informed decisions about how to improve instructional materials.
This final step includes noting what should be kept, deleted and/or added to the content and performance demands of the assignment for tighter alignment with the targeted standards in the lesson/unit.

If reviewers are part of a team, each step of this protocol is to be completed individually before sharing results with others. Reviewers new to this process are encouraged to pause for discussion. More experienced reviewers may choose to complete all steps before discussion.

1. **STEP 1: Review the Instructional Materials.**
   - Record the grade and title of the lesson/unit and analyze the purpose and likely purpose?
   - Locate the assignment to be evaluated and record the assignment title or description on the recording form.
   - Locate the student work that corresponds to the assignment.
   - Scan the lesson/unit to see what it contains and how it is organized.

2. **STEP 2: Without consulting the standards or the lesson/unit, analyze the purpose and demands of the assignment as evidenced by the directions and the rubrics/scoring guides.**
   - Guiding Questions:
     - Based on the directions and/or the scoring guides for the assignment, what is its likely purpose?
     - Based on the directions and/or the scoring guides for the assignment, what makes demands of the student?
   - Reviewers should limit observations to what the assignment and rubrics communicate about the purpose and demands of the assignment. Reviewers will consult the standards in Step 3.

3. **STEP 3: Review the Instructional Materials.**
   - Before discussion.
   - Discussing after each step, more experienced reviewers may choose to complete all steps before sharing results with others. Reviewers new to this process are encouraged to pause for discussion after each step of this protocol is to be completed individually before sharing results with others.
STEP 3: Compare the alignment of the content and performance(s) of the assignment to the targeted standards in the assignment and lesson/unit. How well aligned are the content and performance(s) of the assignment with the targeted standards in the assignment and lesson/unit?

Guiding Questions:

- Do the directions, prompt(s), and/or scoring guide for the assignment give students the opportunity to demonstrate all or part of the targeted standards for the assignment and lesson/unit?
- How well aligned are the content and performance(s) of the assignment with the targeted standards in the assignment and lesson/unit?

Notes & Observations

While it is important to rate the assignment against every standard that the assignment targets, an assignment need not address every targeted standard in the lesson/unit as long as the assignment is central to the learning goal. In making suggestions for improvement, consider whether the assignment was intended to incorporate all of the targeted standards or if the assignment is one of a series of assignments in the lesson/unit used to assess student competency.
If the assignment is given a score of 1 or 0 for any one of the targeted standards, is there another assignment in the lesson/unit that addresses that standard?

Note: For any score of 0, note the gaps in the demands. Record important points concerning alignment (such as partial or cursory alignment as well as examples of strong alignment).

If the assignment is given a score of 1 or 0 for any one of the targeted standards, is there another assignment in the lesson/unit that addresses that standard?

**Task-to-CCSS Alignment Recording Chart**

<table>
<thead>
<tr>
<th>Task Description</th>
<th>Targeted CCSS Standards</th>
<th>Alignment Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment No. 1</td>
<td>0</td>
<td>Poor alignment</td>
</tr>
<tr>
<td>Assignment No. 2</td>
<td>1</td>
<td>Weak alignment</td>
</tr>
<tr>
<td>Assignment No. 3</td>
<td>2</td>
<td>Strong alignment</td>
</tr>
<tr>
<td>Assignment No. 4</td>
<td>3</td>
<td>Excellent alignment</td>
</tr>
</tbody>
</table>

If the assignment is given a score of 1 or 0 for any one of the targeted standards, is there another assignment in the lesson/unit that addresses that standard?
STEP 4: Diagnose student work.

Gaps in Alignment:

Guiding Questions:

- What does the collection of student work communicate about the kind and level of skills and knowledge students have learned and still need to learn?
- What are the most frequent and fundamental successes students appear to be having with the assignment?
- What are the most frequent and fundamental problems students appear to be having with the assignment?
STEP 5: Provide suggestions for improving the assignment and related lesson/unit.

Guiding Questions:

- How could the assignment be strengthened to promote active problem solving?
- How effective are the scoring rubrics/grading guides in communicating and assessing student understanding?
- What should be kept, deleted, and/or added to the assignment or lesson/unit for better alignment with the targeted standards?
- How does the review of student work suggest the strengths and weaknesses of the assignment and related instructional materials?
- How could the assignment be strengthened to promote active problem solving, reasoning, and critical thinking (the Standards for Mathematical Practice)?

Suggestions to strengthen the scoring rubric:

Suggestions to strengthen the assignment:

Suggestions to strengthen the lesson/unit:

Notes & Observations
Assessment Evaluation Tool (AET)

- Mathematics, Grades K–HS ................................................................. III-58
- English Language Arts/Literacy, Grades 3–12................................. III-66

TOOLKIT
for Evaluating Alignment of Instructional and Assessment Materials to the Common Core State Standards
Before you begin

To evaluate each grade/course’s assessments for alignment with the Common Core State Standards (CSS), assessors agree to the following criteria:

1. Assessors meet all of the non-negotiable criteria and associated metrics to align with the CSSM.

2. Each grade/course’s assessments and item banks must be closely aligned.

3. Indicators of quality are scored differently from the non-negotiable criteria: a higher score in Section 2 indicates that assessments are more closely aligned.

BEFORE YOU BEGIN
ALIGNMENT TO THE COMMON CORE STATE STANDARDS

Evaluators of assessments should understand that at the heart of the Common Core State Standards there are substantial shifts in mathematics that require the following:

1) Focus strongly where the Standards focus.
2) Coherence: Think across grades and link to major topics within grade.
3) Rigor: In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Evaluators of assessments must be well versed in the CCSS for the grade level of the materials in question, including understanding the major work of the grade, the supporting and additional work, how the content fits into the progressions in the Standards, and the expectations of the Standards with respect to conceptual understanding, procedural skill and fluency.

It is also recommended that evaluators refer to the Spring 2013 K–8 Publishers’ Criteria for Mathematics and the Spring 2013 High School Publishers’ Criteria for the Common Core State Standards for Mathematics while using this tool.

All grade or course assessments must meet all of the non-negotiable criteria at each grade/course level to be aligned to CCSS.

ORGANIZATION

The Spring 2013 K–12 High School Publishers’ Criteria for the Common Core State Standards for Mathematics were released to the Spring 2013 K–8 Publishers’ Criteria for Mathematics and application. It is also recommended that evaluators refer to the Spring 2013 K–8 Publishers’ Criteria for Mathematics and application/understanding the major work of the grade, the supporting and additional work, how the content fits into the progressions in the Standards, and the expectations of the Standards with respect to conceptual understanding, procedural skill and fluency. Evaluators of assessments should understand the following:

1. Alignment to the Common Core State Standards
2. Assessors align the major topics and major topics within grades
3. Assessors assess the conceptual understanding, procedural skill and fluency, and application with equal intensity

For more on the major work of each grade, see achievethecore.org/emphases.
### SECTION I

<table>
<thead>
<tr>
<th>METRICS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-Negotiable 1. FOCUS ON MAJOR WORK:</strong> The large majority of points in each grade K–8 are devoted to the major work of the grade, and the majority of points in each High School course are devoted to widely applicable prerequisites.</td>
</tr>
</tbody>
</table>

For grades K–8, each grade/course’s assessments meet or exceed the following percentages for the major work of the grade:
- 85% or more of the total points in each grade Kindergarten, 1, and 2 align exclusively to the major work of the grade.
- 75% or more of the total points in each grade 3, 4, and 5 align exclusively to the major work of the grade.
- 65% or more of the total points in each grade 6, 7, and 8 align exclusively to the major work of the grade.

For high school, aligned assessments or sets of assessments meet or exceed the following percentages:
- 50% or more of the total points in each high school course align to widely applicable prerequisites for postsecondary work.

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2 Refer also to criterion #1 in the K–8 Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013) and criterion #1 in the High School Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).

3 The major work of each grade is listed at http://achievethecore.org/focus.

4 The widely applicable prerequisites for postsecondary work is listed at http://achievethecore.org/prerequisites.
<table>
<thead>
<tr>
<th>SECTION I</th>
<th>METRICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Negotiable 2. FOCUS IN K–8: No item assesses topics directly or indirectly before they are introduced in the CCSSM.5</td>
<td></td>
</tr>
</tbody>
</table>

100% of items on the assessment(s) do not assess knowledge of topics before the grade level they are introduced in the CCSSM.

Commonly misaligned topics include, but are not limited to:
- **Probability**, including chance, likely outcomes, probability models. (Introduced in the CCSSM in grade 7)
- **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. (Introduced in the CCSSM in grades 6–8; see CCSSM for specific expectations by grade level.)
- **Similarity, congruence, or geometric transformations.** (Introduced in the CCSSM in grade 8)
- **Symmetry** of shapes, including line/reflection symmetry, rotational symmetry. (Introduced in the CCSSM in grade 4)

Non-Negotiable 2. FOCUS IN K–8: To be aligned to the CCSSM, each grade/course's assessments do not assess topics directly or indirectly before they are introduced in the CCSSM.

<table>
<thead>
<tr>
<th>Meet (Y/N)</th>
<th>Evidence</th>
</tr>
</thead>
</table>

5 Refer also to criterion #2 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
### SECTION I

#### METRICS

**Non-Negotiable 3. RIGOR AND BALANCE:** Each grade/course’s assessments reflect the balances in the Standards and help students meet the Standards’ rigorous expectations by helping students develop conceptual understanding, procedural skill and fluency, and application.  

This criterion applies to fixed form or CAT assessments, whether summative assessments or a set of interim/benchmark assessments. Item banks also should reflect the proportions in the metrics.

| For Conceptual Understanding: Standards requiring student “understanding” (e.g., 3.NF.A.1, 6.RP.A.2, 7.NS.A.1, A-REI.D.10) are explicitly listed in the blueprint(s) and assessed to ensure students have met these expectations.  
• **K–High School:** At least 20% of the total score-points on the assessment(s) for each grade or course explicitly require students to demonstrate conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings.  
| For Procedural Skill and Fluency: Standards requiring students to “fluently” compute (e.g., 3.OA.C.7, 4.NBT.B.4, 5.NBT.B.5, 6.NS.B.2) are explicitly listed in the blueprint(s) and assessed to ensure students have met these expectations.  
• **K–6:** At least 20% of the score-points on the assessment(s) for each grade explicitly assess procedural skill and fluency requirements in the Standards.  
• **7–8 and High School:** At least 20% of the score-points on the assessment(s) for each grade or course explicitly assess procedural skill and fluency.  
| For Applications: Standards requiring students to “solve” “real-life and mathematical problems” (e.g., 1.OA.A.2, 4.OA.A.3, 7.EE.B.3, A-REI.B.4) are explicitly listed in the blueprint(s) and assessed to ensure students have met these expectations.  
• **K–5:** At least 20% of the total score-points on the assessment(s) for each grade explicitly assess solving single- or multi-step word problems.  
• **6–8:** At least 25% of the total score-points on the assessment(s) for each grade explicitly assess solving single- and multi-step word problems and simple models.  
• **High School:** At least 30% of the total score-points on the assessment(s) for each high school course explicitly assess single- and multi-step word problems, simple models, and substantial modeling/application problems.

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6 Refer also to criterion #4 in the K-8 Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013) and criterion #2 in the High School Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).
### SECTION I

**Non-Negotiable 4. PRACTICE-CONTENT CONNECTIONS:** Each grade/course’s assessments include items that meaningfully connect the Standards for Mathematical Content and Standards for Mathematical Practice. However, not all items need to align to a Standard for Mathematical Practice. And there is no requirement to have an equal balance among the Standards for Mathematical Practice in any set of items or test forms.\(^7\)

This criterion applies to fixed form or CAT assessments, whether summative assessments or a set of interim/benchmark assessments. Item banks also should reflect the metrics.

### METRICS

All assessments or sets of assessments include accompanying analysis, aimed at evaluators, which describes:

- how the Standards for Mathematical Practice meaningfully connect to the Standards for Mathematical Content assessed.
- how each item that assesses one or more Standards for Mathematical Practice also aligns to one or more Standards for Mathematical Content.
- how the Standards for Mathematical Practice enhance the focus on major content, rather than detracting from focus.
- how the demands of the Standards for Mathematical Practice are grade-appropriate,
- how items assess the Standards for Mathematical Practice with an arc of growing sophistication, beginning in an elementary way in grades K–5.

<table>
<thead>
<tr>
<th>Meet (Y/N)</th>
<th>Evidence</th>
</tr>
</thead>
</table>

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\(^7\) Refer also to criterion #7 in the K-8 Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013) and criteria #5 High School Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).

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Student Achievement Partners – achievethecore.org/materialsevaluationtoolkit
Published v.2 February 2014 – send feedback to info@studentsachieve.net
<table>
<thead>
<tr>
<th>SECTION I</th>
<th>METRICS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-Negotiable 5. ALIGNMENT OF TEST ITEMS:</strong> Test items elicit direct, observable evidence of the degree to which a student can independently demonstrate the targeted standard(s), adhering to the full intent of the CCSSM.</td>
<td>100% of items and/or sets of items exhibit alignment to the full intent of the CCSSM for that grade or course.</td>
</tr>
<tr>
<td></td>
<td>- Directly reflecting the language of individual standards.</td>
</tr>
<tr>
<td></td>
<td>o For example, 6.EE.3 puts the emphasis on applying properties of operations and generating equivalent expressions, not just mechanically simplifying.</td>
</tr>
<tr>
<td></td>
<td>o Most items aligned to a single standard should assess the central concern of the standard in question.</td>
</tr>
<tr>
<td></td>
<td>- Reflecting the progressions in the Standards.</td>
</tr>
<tr>
<td></td>
<td>o For example, multiplication and division items in grade 3 emphasize equal groups, with no rate problems (grade 6 in CCSS).</td>
</tr>
<tr>
<td></td>
<td>o Assessing all levels of the content hierarchy.</td>
</tr>
<tr>
<td></td>
<td>o For example, by including some items that assess clusters.</td>
</tr>
<tr>
<td></td>
<td>o Using the number system appropriate to the grade level.</td>
</tr>
<tr>
<td></td>
<td>o For example, in grade 3 there are some items involving fractions greater than 1; in the middle grades, arithmetic and algebra use the rational number system, not just the integers.</td>
</tr>
</tbody>
</table>

**Non-Negotiable 5. ALIGNMENT OF TEST ITEMS**

To be aligned with the CCSSM, each grade/course’s assessments only include items that align with the CCSSM.

Meet (Y/N) | Evidence
---|---

Each grade/course’s assessments must meet all five of the non-negotiable criteria to be aligned to the CCSS and to continue to the evaluation in Section II.

# Criteria Met: 8

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8 Refer also to the K–8 Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013) and the High School Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).

9 See the Quality Criteria Checklist for Mathematics Items created by Student Achievement Partners: http://www.ccssitemdevelopment.org/downloads/Quality%20Criteria%20Checklists%20for%20Items.pdf
SECTION II: INDICATORS OF QUALITY

Each grade/course’s assessments must meet all five of the non-negotiable criteria to be aligned to the CCSS and to continue to the evaluation in Section II. Section 2 includes indicators of quality. *Indicators of quality are scored differently from the non-negotiable criteria; a higher score in Section 2 indicates that assessments are more closely aligned.*

Consider this guidance when evaluating:

- **2** – (meets criteria): A score of 2 means that the assessments meet the full intention of the criterion in a grade/course.
- **1** – (partially meets criteria): A score of 1 means that the assessments meet the criterion in many aspects but not the full intent of the criterion.
- **0** – (does not meet criteria): A score of 0 means that the materials do not meet many aspects of the criterion.

### SECTION II INDICATORS OF QUALITY

<table>
<thead>
<tr>
<th></th>
<th>SCORE</th>
<th>JUSTIFICATION/NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Assessing Supporting Content. Assessment of supporting content enhances focus and coherence simultaneously by engaging students in the major work of the grade or course.</td>
<td>2 1 0</td>
<td>Refer also to criterion #3 in the K-8 Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013).</td>
</tr>
<tr>
<td>2. Addressing Every Standard for Mathematical Practice. Every Standard for Mathematical Practice is represented on the assessment(s) for each grade or course.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>3. Expressing Mathematical Reasoning. There are sufficiently many points on the assessment(s) for each grade or course that explicitly assess expressing and/or communicating mathematical reasoning.</td>
<td>2 1 0</td>
<td>Refer also to criterion #9 in the K-8 Publishers’ Criteria for the Common Core State Standards for Mathematics (Spring 2013) and criteria #7 High School Publishers’ Criteria for the CCSSM (Spring 2013).</td>
</tr>
<tr>
<td>4. Constructing Forms Without Cuing Solution Processes. Item sequences do not cue the student to use a certain solution process during problem solving and assessment(s) include problems requiring different types of solution processes within the same section.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>5. Calling for Variety in Student Work. Items require a variety in what students produce. For example, items require students to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>6. Utilizing a Variety in Presentation of the Content. Items present mathematical content in a variety of ways so that students must thoughtfully engage with various application contexts, mathematical representations, and structures of equations.</td>
<td>2 1 0</td>
<td></td>
</tr>
<tr>
<td>7. Using Grade-Appropriate Presentation. The graphics, diagrams, vocabulary, and sentence structure in each item are appropriate for students at that grade level.</td>
<td>2 1 0</td>
<td></td>
</tr>
</tbody>
</table>
8. **Providing Quality Materials.** The assessment items, answer keys, and documentation are free from mathematical errors.  

|   | 2 | 1 | 0 |

9. **Offering Coherent Representations.** Where specific features of the standards do not vary strongly across the grades, consistent, coherent representations are used (e.g., area models are used for multiplication of whole numbers and fractions in grades 3–5, number line models are used for representing order and magnitude of numbers in grades 2–8, and similar situation types are used for word problems in grades K–6).  

|   | 2 | 1 | 0 |

10. **Generating Focused Score Reports.** All score report information, including subscores, supporting texts, and performance level descriptors, highlight the focus of the assessment(s). They give instructionally valuable information and provide information about progress toward college and career readiness.  

|   | 2 | 1 | 0 |

| ADD UP TOTAL POINTS EARNED | Total | Notes/Justification: |
To evaluate a set of assessments for alignment with the Common Core State Standards (CCSS), analyze the assessments against the non-negotiable criteria in the table below. Assessments and item banks must meet all of the relevant non-negotiable criteria and the corresponding metrics to align with the CCSS. Criteria labeled as Indicators of Superior Quality are different from the non-negotiables: Although the assessments may be aligned without meeting the Indicators of Superior Quality, assessments that do reflect these indicators are better aligned.

BEFORE YOU BEGIN . . .

Evaluators of assessments should be aware that at the heart of the Common Core State Standards there are substantial shifts in ELA/Literacy that require:

1. **Complexity**: Regular practice with complex text and its academic language
2. **Evidence**: Reading, writing, and speaking grounded in evidence from text, both literary and informational
3. **Knowledge**: Building knowledge through content-rich non-fiction

Evaluators should be well versed in the standards for the grade level(s) of the assessments being reviewed. It is also recommended that evaluators refer to the Publishers’ Criteria for the Common Core State Standards in ELA/literacy grades 3-12 and the Supplement to Appendix A of the Common Core State Standards for ELA/Literacy: New Research on Text Complexity.

### NON-NEGOTIABLE CRITERIA FOR ALIGNMENT TO THE COMMON CORE

<table>
<thead>
<tr>
<th>Non-Negotiable 1. COMPLEXITY OF TEXTS:</th>
<th>METRICS</th>
<th>MEETS METRICS (Y/N)</th>
<th>JUSTIFICATION / COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELA/literacy texts have the appropriate level of complexity for the grade, according to both quantitative measures and qualitative analysis of text complexity.</td>
<td>1A) 100% of texts on ELA/literacy assessments or in an item bank are accompanied by specific evidence that they have been analyzed with at least one research-based quantitative measure for grade-band placement. (See the Supplement to Appendix A of the Common Core State Standards for ELA/Literacy.) <em>Indicator of Superior Quality: Reading texts have been analyzed by two or more research-based quantitative measures, rather than just one.</em>&lt;br&gt;1B) 100% of texts on ELA/literacy assessments or in an item bank are accompanied by specific evidence that they have been analyzed with a qualitative measure indicating a specific grade-level placement. (For a sample qualitative measure, see the Supplement to Appendix A.)&lt;br&gt;1C) All, or nearly all, of the reading texts are placed within or above the grade band indicated by the quantitative analysis. Rare exceptions (in which the qualitative measure has trumped the quantitative measures and placed the text below the grade band) are usually reserved for literary texts in the upper grades.&lt;br&gt;1D) In a set of ELA/literacy assessments, the complexity of reading texts increases during each year and year by year. Because the standards have raised the bar for text complexity, assessments must thoughtfully balance total word count per test form with the time allotted, so that students have sufficient time to study each text carefully and deeply.&lt;br&gt; <em>Indicator of Superior Quality: In assessments and item banks, texts vary in length; students are challenged by complex texts across a range of word counts.</em></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Non-Negotiable 2. Range of Texts:

ELA/literacy assessment texts reflect the distribution of text types and genres required by the standards.

#### 2A) Texts on ELA/literacy assessments or in an item bank approximate the following distributions of text types:
- Grades 3-5: 50% literature / 50% informational text
- Grades 6-8: 45% literature / 55% informational text
- High School: 30% literature / 70% informational text

#### 2B) In grades 6-12, informational texts on ELA/literacy assessments or in an item bank approximate an equal balance of literary nonfiction, history/social studies, and science/technical subjects.

#### 2C) 100% of the texts used on ELA/literacy assessments or in an item bank represent the genres and text characteristics that are specifically required by the standards at each grade.

#### 2D) The vast majority of score points on ELA/literacy assessments relate to single texts, with the selection of paired or multiple texts meeting the requirements of the standards at each grade.

*Indicator of Superior Quality:* When research simulation tasks are included on an assessment, the set of texts includes at least two texts, one of which is an anchor text, providing foundational knowledge and leading naturally to additional exploration.

### Non-Negotiable 3. Quality of Texts:

The quality of texts and other stimuli is high--they are worth reading closely and exhibit exceptional craft and thought and/or provide useful information.

#### 3A) 100% of passages are texts worth reading; they are content rich and well crafted, representing quality writing in their genre and subject matter. Nearly all texts and other stimuli thus are previously published rather than “commissioned.”

*Indicator of Superior Quality:* If any commissioned texts are used, evidence is provided that these texts have been reviewed and edited by professional publication editors in addition to assessment editors.

#### 3B) 100% of history/social studies and science/technical texts, specifically, reflect the quality of writing that is produced by authorities in the particular academic discipline and enable students to develop rich content knowledge.

#### 3C) 50% or more of informational texts use informational text structures rather than a narrative structure, while still following the distribution of subject matter in Non-Negotiable 2. Most informational texts with narrative structures are found in history and literary nonfiction.

#### 3D) Illustrations in previously published texts are included in the assessment—or new illustrations are added—when illustrations aid student understanding of the text and/or provide important additional information.

#### 3E) When reading texts are presented with introductory material (e.g., information about the author or the context in which the text is written), the introduction is brief and avoids explaining the meaning of the text or giving students answers to questions.
### II. Reading Test Questions

**Non-Negotiable 4. TEXT-DEPENDENT AND TEXT-SPECIFIC QUESTIONS:**

Test questions are always text-dependent and usually text-specific: They require students to read closely, find the answers within the text(s), and use textual evidence to support their responses.

<table>
<thead>
<tr>
<th>METRICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4A) 100% of the questions on reading assessments are text-dependent: The questions arise from and require close reading and analysis of the text; they can be answered correctly without prior knowledge; and they are linked to a text (i.e., not “stand alone”).</td>
</tr>
<tr>
<td>4B) A large majority of questions are text specific (i.e., not “generic” questions that could be asked about any text).</td>
</tr>
<tr>
<td>4C) A majority of score points on ELA/literacy assessments is based on items that reflect the requirements of Reading Standard 1 by requiring students to <strong>directly</strong> select or provide evidence from the text to support their answers.</td>
</tr>
<tr>
<td>4D) ELA/literacy assessments rely on a variety of types of test questions, including when possible technology-enhanced and constructed-response formats, to approach the texts in ways uniquely appropriate to each text.</td>
</tr>
</tbody>
</table>

**Non-Negotiable 5. ALIGNMENT OF TEST QUESTIONS:**

Test questions reflect the rigor and cognitive complexity demanded by the standards; they assess the depth and breadth of the standards at each grade level.

<table>
<thead>
<tr>
<th>METRICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>5A) 100% of the questions on ELA/literacy assessments and in an item bank are rigorous and challenging; they assess the range of complexity and the depth of analytical thinking required by the standards.</td>
</tr>
<tr>
<td>5B) 100% of the questions on ELA/literacy assessments and in an item bank focus on the central ideas and important particulars of the text, rather than superficial or peripheral aspects.</td>
</tr>
<tr>
<td>5C) 100% of the questions on ELA/literacy assessments and in an item bank assess the specific requirements delineated in the standards at each grade level, i.e., the concepts, topics, and texts named in the grade-level standards. (However, not every standard must be assessed with every text.)</td>
</tr>
<tr>
<td>5D) A vast majority of vocabulary items on assessments and in an item bank assess academic vocabulary (tier 2 words).</td>
</tr>
<tr>
<td>5E) 100% of vocabulary items on assessments and in an item bank assess words that are important to the central ideas of the text.</td>
</tr>
</tbody>
</table>
### III. Writing to Sources and Research

**Non-Negotiable 6. WRITING TO SOURCES:**

Most writing prompts, at all grade levels, are text-dependent, and all reflect the writing types named in the standards.

**6A)** A vast majority of written tasks at all grade levels, including narrative tasks whenever possible, require students to write to sources, i.e., to confront text or other stimuli directly, to draw on textual evidence, and to support valid inferences from text or stimuli.

**6B)** All writing tasks on ELA/literacy assessments or in an item bank approximate the following proportions. Alternately, they may reflect blended forms (e.g., exposition and persuasion) in similar proportions.

- Grades 3-5: exposition 35% opinion 30% narrative 35%
- Grades 6-8: exposition 35% argument 35% narrative 30%
- High School: exposition 40% argument 40% narrative 20%

**6C)** 100% of research tasks include writing to sources.

*Indicator of Superior Quality:* Narrative prompts are increasingly text-based as students progress through the grades, with narrative description (text-based, chronological writing) rather than imaginative narratives dominant in the 20% of high school writing that is the narrative type.

*Indicator of Superior Quality:* Tests whose purpose is to assess reading abilities include brief or extended writing tasks or other constructed-response questions as part of the variety of test questions for each test form (see 4D).

### IV. Speaking and Listening Test Questions

**Non-Negotiable 7. SPEAKING AND LISTENING:**

Items assessing speaking and listening reflect true communication skills required for college and career readiness.

**7A)** 100% of the texts and other stimuli used in speaking and listening assessments meet the criteria for complexity, range, and quality of texts (Non-Negotiables 1, 2, and 3).

**7B)** In a set of listening assessments, the complexity of texts increases during each year and year by year. Because, however, listening skills in elementary school generally outpace reading skills, listening texts may exhibit greater variability in complexity during a year.

**7C)** 100% of assessments focused on speaking assess students’ ability to engage effectively in a range of conversations and collaborations by expressing well-supported ideas clearly and probing ideas under discussion by building on others’ ideas.

**7D)** 100% of items assessing listening permit the evaluation of active listening skills, such as taking notes on main ideas, asking relevant questions, and elaborating on remarks of others.

**7E)** 100% of assessments focused on speaking include some items that measure students’ ability to marshal evidence to orally present findings from a research performance task.
### V. Language Test Questions

**Non-Negotiable 8. LANGUAGE:**

**Items assessing conventions and writing strategies reflect actual practice to the extent possible.**

<table>
<thead>
<tr>
<th>METRICS</th>
<th>MEETS METRICS (Y/N)</th>
<th>JUSTIFICATION / COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>8A)</strong> A majority of items assessing language mirror real-world activity (e.g., actual editing or revision, actual writing).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>8B)</strong> Questions focused on English conventions represent common student errors and focus on the conventions most important for college and career readiness (see “Language Progressive Skills, by Grade” <a href="http://www.corestandards.org/assets/CCSSI_ELA%20Standards.pdf">http://www.corestandards.org/assets/CCSSI_ELA%20Standards.pdf</a>).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>8C)</strong> Questions focused on writing strategies represent flaws common to student writing and focus on strategies most important for college and career readiness (see “Language Progressive Skills, by Grade” <a href="http://www.corestandards.org/assets/CCSSI_ELA%20Standards.pdf">http://www.corestandards.org/assets/CCSSI_ELA%20Standards.pdf</a>).</td>
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</tr>
</tbody>
</table>

### VI. Test Blueprints and Score Reports

**Non-Negotiable 9. TEST BLUEPRINTS AND SCORE REPORTS:**

**Test blueprints and the corresponding score reports reflect the focus of the standards.**

<table>
<thead>
<tr>
<th>METRICS</th>
<th>MEETS METRICS (Y/N)</th>
<th>JUSTIFICATION / COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9A)</strong> Score reports provide actionable data regarding a student’s progress on the continuum toward college and career readiness. Reports are based on test blueprints consisting of domains that are research based and instructionally actionable (e.g., reading literature, reading informational texts, vocabulary, writing, language skills). Because they do not provide research-based instructionally actionable guidance, the ELA/literacy cluster headings (e.g., “Key Ideas and Details,” “Craft and Structure,” “Production and Distribution of Writing”) are not used either as domains in test blueprints or as reporting categories.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>9B)</strong> The blueprints (or other design documents) for ELA/literacy assessments reflect the distributions of text types described in 2A above, and there is a sufficient number of score points so that reading literature and reading informational texts could be reporting categories (separate reporting categories for literature and informational texts are not required).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>9C)</strong> A reading assessment or a system of ELA/literacy assessments includes a sufficient number of points for the domain of vocabulary acquisition and use so that vocabulary could be a reporting category (a reporting category for vocabulary is not required).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>9D)</strong> A writing assessment or a system of ELA/literacy assessments includes a sufficient number of points for the domain of language so that language could be a reporting category (however, a reporting category for language is not required). The language points may be obtained from test questions assessing language, or the points may be obtained from student writing. If the purpose of an assessment is solely to measure reading abilities, language items are not required. <strong>Indicator of Superior Quality:</strong> Simulated research tasks comprise a significant percentage of the total number of score points on reading assessments.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Assessment Passage and Item Quality Criteria Checklist

- Mathematics, Grades 3–HS ............................................................ III-71
- English Language Arts/Literacy Passages, Grades 3–12 ................ III-73
- English Language Arts/Literacy Items, Grades 3–12 ..................... III-76

TOOLKIT

for Evaluating Alignment of Instructional and Assessment Materials to the Common Core State Standards
Assessment Item Quality Criteria Checklist – Mathematics Grades 3-High School

Process for Reviewing Items for Common Core State Standards-aligned Assessments

Step 1: Solve the item.

Step 2: Evaluate the item according to the criteria on the following page. The criteria are set-up in a gated manner so that reviewers can quickly and systematically determine whether an item aligns to, or strays from, the expectations of the CCSSM. Reviewers use the “Y/N/R” column by placing a:

- “Y” if the item meets the expectations of the criterion;
- “N” if the item does not meet the expectation of the criterion;
- “R” if the item, as it currently exists, does not meet the criterion, but could be revised to do so; and
- in the second gate, place “NA” in the middle column if the criterion is not applicable to the item.

Use the rightmost column to explain your determination using evidence.

Have the Common Core State Standards for Mathematics open for continual reference.
# Criteria for Evaluating Items for Common Core State Standards-aligned Assessments

- **Reviewer has solved the problem**

**FIRST GATE:** The item must meet all of the following to be considered further.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Y/N/R</th>
<th>Explain</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.A Alignment:</strong> Is the item directly and accurately aligned to the assessment target and standard(s) indicated, including the Standards for Mathematical Practice(s) listed?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1.B Correctness:</strong> Is the item mathematically correct, including at least one appropriate solution and accurate use of mathematical vocabulary and symbols?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1.C Rationales and/or Top-Score Response:</strong> 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?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1.D Grade Appropriateness:</strong> Does the item reflect the coherence of the standards by using appropriate mathematical vocabulary, numbers, and symbols for the grade or course?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If the item does not meet all of the criteria above and cannot be revised to do so, remove the item from consideration. Otherwise, proceed to the second gate.

**SECOND GATE:** Items that pass the first gate must next meet the following criteria, possibly after revision.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Y/N/R</th>
<th>Explain</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2.A Linguistic Clarity:</strong> Is the text of an item written clear, unambiguous, and appropriate for the grade level with no construct-irrelevant linguistic complexity (e.g., negative phrasings, complex sentence structures)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.B Technical Quality:</strong> Does the item clearly communicate the expectation, preclude guessing, and refrain from cluing a student's response strategy?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.C Accessibility:</strong> Is the item accessible, reflecting Universal Design for Learning (UDL) principles to maximize accessibility for ELL students and students with disabilities?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.D Technology:</strong> If technology is used, is it clear, easily used by the students, improves measurement of the construct, and represents real-life use of technology, where applicable?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.E Complexity:</strong> Does the item align to the intended complexity required by the assessment claim and standard(s) being assessed, without any needless complexity or difficulty?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.F Context Quality:</strong> When a situational or real-world context is present for the item, is the context logical, grade appropriate, and necessary to assess the standard?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.G Stimuli:</strong> Are diagrams, pictures, or illustrations, clear, purposeful, and consistent with UDL principles?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.H Rubric:</strong> For open-ended items, are rubrics clear, aligned to the assessment target, and valid for all solution paths?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Criteria for Evaluating Texts for CCSS-Aligned Assessments

<table>
<thead>
<tr>
<th>1. A Text Quality:</th>
<th>The text worthy of close, analytic reading?</th>
<th>Y/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.B Text Type:</td>
<td>Does the text meet the specific requirements of the task?</td>
<td>Y/N</td>
</tr>
<tr>
<td>1.C Text Complexity:</td>
<td>The extent to which qualitative measures and a text worthy of close reading exemplify the following traits:</td>
<td>Y/N</td>
</tr>
<tr>
<td>1.D Potential for Questions Worth Asking:</td>
<td>This question does not inadvertently clue a student on the correct answer or each distractor?</td>
<td>Y/N</td>
</tr>
<tr>
<td>2.A Linguistic Clarity:</td>
<td>This item or task written in clear, unambiguous, and maintains the author's original intent.</td>
<td>Y/N</td>
</tr>
<tr>
<td>2.B Technical Quality:</td>
<td>Is the item or task written in clear, unambiguous, and maintains the author's original intent.</td>
<td>Y/N</td>
</tr>
<tr>
<td>2.C Accessibility:</td>
<td>Is the item or task accessible and follows the criteria in the second gate.</td>
<td>Y/N</td>
</tr>
<tr>
<td>2.D Technology:</td>
<td>If technology is used, does it provide value beyond that of the criteria in the second gate.</td>
<td>Y/N</td>
</tr>
<tr>
<td>2.E Complexity</td>
<td>Does the item or task align to the intended complexity for seeking and paying for copyright permission and for special consideration if there are potential bias and sensitivity.</td>
<td>Y/N</td>
</tr>
</tbody>
</table>

**First Gate:** The text must meet all of the criteria in the first gate. If an item or task as is does not meet the criterion, but could be revised to do so, please use the “Explanation” column to clarify when a passage receives an “N.” If a criterion does not apply to a particular passage, leave the columns blank.

**Second Gate:** If the text does not have a “Y” in all of the criteria above, remove it from consideration. If the text does meet the criteria in the first gate, proceed to the second gate. Then make a recommendation whether to accept, accept with conditions, or reject the passage.

The third and fourth gates apply to pairs of groups of texts. Each text should pass through the first and second gates before being reviewed against the criteria in the third and fourth gates. Again, reviewers will be asked to make a recommendation whether to accept, accept with conditions, or reject the passage. A particular passage that meets all of the criteria will be removed from consideration. If a text does not meet all of the criteria in the first gate, it should be removed from consideration.

### Notes

1. Text worthy of close reading exemplifies all of the following traits:
   - A text of superior, professional-quality literary or informational writing,
   - Demonstrates coherence, thorough development of ideas, clear use of evidence and details, and effective structure.
   - Illustrates superior, professional-quality literary or informational writing, e.g., demonstrates coherence, thorough development of ideas, clear use of evidence and details, and effective structure.
   - Presents a professional-quality editor’s or reviewer’s mark, where applicable.

2. If the item or task is not in the top 25 percent, place “N” in the column to the right of the question.

3. If the text is not in the top 50 percent, place “N” in the column to the right of the question.

4. If the text is not in the top 75 percent, place “N” in the column to the right of the question.

5. If the text is not in the top 90 percent, place “N” in the column to the right of the question.

### Table

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.A Alignment:</td>
<td>The item or task directly and accurately reflects the criteria.</td>
</tr>
<tr>
<td>1.B Text Type:</td>
<td>The text worthy of close, analytic reading?</td>
</tr>
<tr>
<td>1.C Text Complexity:</td>
<td>The extent to which qualitative measures and a text worthy of close reading exemplify the following traits:</td>
</tr>
<tr>
<td>1.D Potential for Questions Worth Asking:</td>
<td>This question does not inadvertently clue a student on the correct answer or each distractor?</td>
</tr>
<tr>
<td>2.A Linguistic Clarity:</td>
<td>This item or task written in clear, unambiguous, and maintains the author's original intent.</td>
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<td>Is the item or task written in clear, unambiguous, and maintains the author's original intent.</td>
</tr>
<tr>
<td>2.C Accessibility:</td>
<td>Is the item or task accessible and follows the criteria in the second gate.</td>
</tr>
<tr>
<td>2.D Technology:</td>
<td>If technology is used, does it provide value beyond that of the criteria in the second gate.</td>
</tr>
<tr>
<td>2.E Complexity</td>
<td>Does the item or task align to the intended complexity for seeking and paying for copyright permission and for special consideration if there are potential bias and sensitivity.</td>
</tr>
</tbody>
</table>

### Additional Notes

- The criteria in the first gate are passed through the second gate.
- Please use the “Explanation” column to clarify when a passage receives an “N.” If a criterion does not apply to a particular passage, leave the columns blank.
- Review the text against the criteria in order, and place a “Y” or “N” in the middle column labeled “Y/N.”

**Assessment Passages Quality Criteria Checklist – ELA/Algebra Grades 3-12**
<table>
<thead>
<tr>
<th>Non-Explanatory</th>
<th>Explanatory</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Y</em> or <em>N</em></td>
<td><em>Y</em> or <em>N</em></td>
</tr>
<tr>
<td><strong>Explanation</strong></td>
<td><strong>Explanation</strong></td>
</tr>
</tbody>
</table>
### Text Genres/Characteristics

Do the texts or other stimuli in the set clearly reflect the specific requirements of the relevant paired or multi-text standards or targets, the item or task model, and/or the test blueprint?

For an explanation of CCSS requirements for paired or multi-text stimuli, see the website [www.ccssitemdevelopment.org](http://www.ccssitemdevelopment.org) and download the Paired Passages Essay:


### Relationships Among Texts

Do the texts/stimuli have a clear and meaningful relationship, with testable points arising from significant points of comparison or integration of ideas?

### Video or Audio

If the text is a video or audio stimulus, does it meet the same quality criteria as for other texts? In addition, is the quality of sound and video appropriate for use on assessments?

If, as a set, the texts do not have a “Y” in all of the criteria above, remove them from consideration. If the texts do meet the criteria in the third gate, proceed to the fourth gate.

### Fourth Gate: Pairs or Multi-Text Stimuli

A set of texts that passes the third gate must meet the following criteria, as applicable.

<table>
<thead>
<tr>
<th>Y/N</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Y.</strong> Audio or Visual Elements: Do the multimedia elements add value to the set? (Audio or visual elements should provide testable points of comparison or integration, rather than simply entertainment.)</td>
</tr>
<tr>
<td></td>
<td>If yes, place a “Y” in the column to the right.</td>
</tr>
<tr>
<td></td>
<td>If the audio or visual elements do not meet the requirements for an anchor text, place an “N” in the column to the right.</td>
</tr>
</tbody>
</table>

**Acceptable (all “Y”s)” **

**Acceptable conditionally, with comments to be addressed**

**Rejected**
### Criteria for Evaluating Items for CCSS-Aligned Assessments

#### First Gate: Single Items

**1. Value:**
- Is the item worthy of student attention, and does it allow students to deliver insights about the text?

**2. Text Dependency:**
- Does the item require close analytic reading of the text (either close reading of part of a text or the entire text)? Providing the correct answer should not require prior knowledge, nor should it be possible for students to answer the question without reading the text.
- Does the item require students to use evidence from the text to reason and/or make valid inferences?
- Does the item require students to use evidence to support or reject their understanding of the text? If students are able to answer the question without reading the text, this criterion is not met.

**3. Alignment:**
- Does the item clearly align with the intent and language of one or more Common Core State Standard(s) or evidence statement(s) targeting Reading standard 1?

**4. Rationales and/or Top-Score Responses:**
- For an SR item, are effective rationales, which describe the answer choices rather than predict student behavior, provided for the correct answer and each distractor?
- For a CR item, are sample responses provided for each score point?

If the item does not have a “Y” in all of the criteria above, remove the item from consideration. If the item does not have a “Y” in at least one of the criteria above, proceed to the second gate for single items.

#### Second Gate: Single Items

- Items that pass the first gate must meet or be revised to meet the following, as applicable:

**1. Value:**
- Is the item worthy of student attention, and does it allow students to deliver insights about the text?

**2. Text Dependency:**
- Does the item require close analytic reading of the text (either close reading of part of a text or the entire text)? Providing the correct answer should not require prior knowledge, nor should it be possible for students to answer the question without reading the text.

**3. Alignment:**
- Does the item clearly align with the intent and language of one or more Common Core State Standard(s) or evidence statement(s) targeting Reading standard 1?

**4. Rationales and/or Top-Score Responses:**
- For an SR item, are effective rationales, which describe the answer choices rather than predict student behavior, provided for the correct answer and each distractor?
- For a CR item, are sample responses provided for each score point?

If the item does not have a “Y” in all of the criteria above, remove the item from consideration. If the item does meet the criteria in the first gate, proceed to the second gate for single items.

#### Gate for Items Within a Set

- If an item does not receive a “Y” in all of the criteria above, remove the item from consideration. If the item does not receive a “Y” in at least one of the criteria above, proceed to the gate for items within a set.

- Sets of items must meet the criteria in the third gate, and they should be revised to meet relevant criteria in the first gate.

- The second gate’s criteria should be used to determine whether to accept, accept conditionally, or reject the item set. If a criterion does not apply to a particular item, leave the column blank.

- The following criteria are designed to help item reviewers determine if an item or set of items aligns to the Common Core State Standards (CCSS). The criteria are set up in a gated manner so that reviewers can quickly and systematically determine where the item or set of items strays from the expectations of the CCSS.

#### Assessment Item Quality Criteria Checklist – ELA/literacy Grades 3-12

The following criteria are designed to help item reviewers determine if an item or set of items aligns to the Common Core State Standards (CCSS). The criteria are set up in a gated manner so that reviewers can quickly and systematically determine where the item or set of items strays from the expectations of the CCSS.

The following criteria are designed to help item reviewers determine if an item or set of items aligns to the Common Core State Standards (CCSS). The criteria are set up in a gated manner so that reviewers can quickly and systematically determine where the item or set of items strays from the expectations of the CCSS.
<table>
<thead>
<tr>
<th>2.E Hand Scoring</th>
<th>If the item is to be hand-scored, does it provide information beyond what would be gained from a selected-response or machine-scored item?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2.F Comparison Items</strong></td>
<td>If the item calls for comparison or synthesis of ideas, is the comparison or synthesis meaningful and related to central ideas in the text?</td>
</tr>
<tr>
<td><strong>2.D Technology</strong></td>
<td>If technology is used: Does it provide value beyond that of a non-technology-enhanced item (i.e., no use of technology for technology's sake, no confusing instructions or complicated actions)? Does it provide features beyond those of non-technology-enhanced items?</td>
</tr>
<tr>
<td><strong>2.C Technical Quality</strong></td>
<td>Does the item exemplify high standards of technical quality? For an SR item, for example, the question precludes guessing (plausible distractors or gridded response), the correct response is defensible based on textual evidence, no option is conspicuous and therefore possibly inviting, etc. For a CR item, for example, there is a clear description of the task and the criteria for scoring. The above descriptions of technical quality are not exhaustive; reviewers should call on their knowledge of all best practices to evaluate technical quality.</td>
</tr>
<tr>
<td><strong>2.B Clarity of Language</strong></td>
<td>Is the language used in the item clear and concise, and does it avoid negative phrasings and complex sentence structures (unless such structures are being tested)?</td>
</tr>
<tr>
<td><strong>2.A Text Specificity</strong></td>
<td>Is the item not only text-dependent but also text-specific—not a generic question, but one that arises organically from the text and applies the language of the standards relevant to it?</td>
</tr>
<tr>
<td>Y/N</td>
<td>Comments</td>
</tr>
<tr>
<td>-----</td>
<td>----------</td>
</tr>
</tbody>
</table>

**3. THIRD GATE: ITEM SETS (ITEMS ASSOCIATED WITH A TEXT OR TEXTS)**

- **3.A Comprehensiveness:** Does the set require students to read the full text carefully and show their understanding of the central ideas?
  - If the set requires a non-hero 2 worth of facts about the topic, remove it from consideration (if the set passes this criterion, proceed to the next gate).
  - If yes, place a "Y" in the column to the right.
  - If the set does not meet this criterion, place an "N" in the column at the right, specify problems, suggest revisions, or give reasons that justify retaining the item.

**4. FOURTH GATE: ITEM SETS (ITEMS ASSOCIATED WITH A TEXT OR TEXTS)**

- **4.H Vocabulary Items:** If the item tests vocabulary, does it focus on crucial academic (tier 2) vocabulary in context and do the distractors reflect the same part of speech as the word being tested?
  - If yes, place a "Y" in the column to the right.
  - If the item tests a non-tier 2 word or tests other vocabulary skills besides use of context, place an "N" in the column to the right and specify problems, suggest revisions, or give reasons that justify retaining the item.

**Explanation Column**

- If the item contains a graphic organizer or other narrow formats in test items, remove the item from consideration (if the set passes this criterion, proceed to the next gate).

**Notes:**

- If the item set does not have a "Y" for the criterion above, remove the set from consideration. If the set meets the above criterion, proceed to the next gate.

**Revisions:**

- Justify retaining the item.
- Specify problems, suggest revisions, or give reasons that justify retaining the item.
- If the item requires a non-hero 2 worth of facts about the topic, remove it from consideration.
- If the item focuses on crucial academic (tier 2) vocabulary in context, place a "Y" in the column to the right.
- If the item does not meet this criterion, place an "N" in the column and specify problems, suggest revisions, or give reasons that justify retaining the item.

**Acceptance Criteria:**

- Accepted conditionally, with comments to be addressed.
- Accepted (all "Y's").
## Standard Coverage

Does the set address as many different Standards (and evidence statements/targets) as possible, with items based on the individual characteristics of the text and focused on key aspects of the text? The set of items should be extensive and robust enough that a good selection of items will remain after field testing.

If yes, place a “Y” in the column at the right.

If no, place an “N” in the column at the right and indicate in the Explanation column which items clue each other so that they can be marked in the bank appropriately (not to be used on the same form).

---

| 4.A Standard Coverage |  
|-----------------------|-----------------------|
| **Item Cluing:** Do the items avoid cluing the answer to other items? | **Explanation:** Items should be based on the individual characteristics of the text and standards (and evidence statements/targets) as possible, with different aspects of the text. |

---

**Accepted (all “Y’s”)**

**Rejected**

**Accepted conditionally, with comments to be addressed**
Additional Resources for Evaluating Alignment of Instructional Materials

- Achieve Open Educational Resource Rubrics ................................................................. IV-1
- Qualitative Measures Rubric for Informational Text and
  Qualitative Measures Rubric for Literature................................................................. IV-1
- CCSS Grade Bands and Quantitative Measures ....................................................... IV-1
- Illustrative Mathematics Task Review Tool .............................................................. IV-1

TOOLKIT
for Evaluating Alignment of Instructional and Assessment Materials to the Common Core State Standards
IV. Additional Resources for Evaluating Alignment of Instructional and Assessment Materials

**Achieve Open Educational Resource (OER) Rubrics**

Open Educational Resources (OER) are instructional materials, often in a digital and online format, that contain an open copyright license that allows educators to share, reuse and edit these materials. The OER Rubrics can be used in developing or evaluating OER to help determine the degree of alignment of OER to the CCSS, and to determine aspects of quality of OER. OER range from a single lesson or instructional support material (such as a problem set or game) to a complete unit or set of support materials.

To view and download, please visit: http://www.achieve.org/oer-rubrics

**Qualitative Measures Rubric for Informational Text and Qualitative Measures Rubric for Literature**

Developed by the Council of Chief State School Officer’s English Language Arts state collaborative to support qualitative analysis of what makes a given text complex, these qualitative rubrics guide educators in measuring features of text complexity, such as: text structure, language clarity and conventions, knowledge demands, and levels of meaning and purpose.

To view and download, please visit: http://www.achieve.org/ela-literacy-common-core/text-complexity/qualitative-measures or www.ccsso.org/textcomplexity (Launching August 2013)

**CCSS Grade Bands and Quantitative Measures**

A step-by-step guide to accessing free, online tools that identify the appropriate grade band for a text.

To view and download, please visit:
http://achievethecore.org/ela-literacy-common-core/text-complexity/quantitative-measures

**Illustrative Mathematics Task Review Tool**

The Illustrative Mathematics task review criteria are used to evaluate K-12 mathematics tasks designed specifically to illustrate the CCSSM and intended for inclusion on the Illustrative Mathematics website (http://www.illustrativemathematics.org/). Each task is intended to be part of a highly crafted set that illustrates the breadth, depth and nuances of each standard, cluster, domain, grade level, or conceptual category in the standards. In order to be published at Illustrative Mathematics, a task must meet all eight criteria described in the review form.

To view and download, please visit:
https://docs.google.com/file/d/0B7UDDaSOTTwkcWRJZjRGNWFWTWs/edit?usp=sharing.
Appendix: Publishers’ Criteria for the Common Core State Standards

- Mathematics, Grades K–8 ............................................................................................................................. V-1
- Mathematics, High School ...........................................................................................................................V-23
- English Language Arts/Literacy, Grades K–2 .................................................................................................V-43
- English Language Arts/Literacy, Grades 3–12...............................................................................................V-52
These Standards were developed through a bipartisan, state-led initiative spearheaded by state superintendents and state governors. The Standards reflect the collective expertise of hundreds of teachers, education researchers, mathematicians, and state content experts from across the country. The Standards build on the best of previous state standards plus a large body of evidence from international comparisons and domestic reports and recommendations to define a sturdy staircase to college and career readiness. Most states have now adopted the Standards to replace previous expectations in English language arts/literacy and mathematics.

Standards by themselves cannot raise achievement. Standards don't stay up late at night working on lesson plans, or stay after school making sure every student learns—it's teachers who do that. And standards don't implement themselves. Education leaders from the state board to the building principal must make the Standards a reality in schools. Publishers too have a crucial role to play in providing the tools that teachers and students need to meet higher standards. This document, "Appendix A: The K–8 Publishers' Criteria for the Common Core State Standards for Mathematics," aims to support faithful CCSSM implementation by providing criteria for how publishers can use these criteria to develop, evaluate, or purchase aligned materials, or to supplement materials already in use. These criteria were developed from the perspective that publishers and purchasers are equally responsible for fixing the materials market. Publishers cannot deliver focus to buyers who only ever complain about what has been left out, yet never complain about what has crept in. More generally, publishers cannot deliver focus to buyers who only ever complain about the materials marketplace. Publishers must make alignment more clearly visible.

These criteria were developed from the perspective that publishers and purchasers are equally responsible for fixing the materials marketplace. Publishers cannot deliver focus to buyers who only ever complain about what has been left out, yet never complain about what has crept in. More generally, publishers cannot invest in quality if the market doesn't demand it of them or reward them for making alignment more clearly visible.

How should alignment be judged? Traditionally, judging alignment has been approached as a crosswalking exercise. But crosswalking can result in large percentages of "aligned content" while obscuring the fact that the materials in question align not at all to the letter or the spirit of the Standards. These criteria are an attempt to sharpen the alignment question and make alignment and misalignment more clearly visible.

I. Focus, Coherence, and Rigor in the Common Core State Standards for Mathematics

II. Criteria for Materials and Tools Aligned to the K–8 Standards

III. Appendix: "The Structure is the Standards"
Focus, Coherence, and Rigor in the Common Core State Standards for Mathematics

Less topic coverage can be associated with higher scores on those topics covered because students have more time to master the content that is taught.

—Ginsburg et al., 2005, Reassessing U.S. International Mathematics Performance: New Findings from the 2003 TIMSS and PISA

Moreover, prior to the Common Core, state standards were making little progress in terms of postsecondary instructors targeting fewer skills as being of high importance. This finding that postsecondary instructors target fewer skills as being of high importance is consistent with recent policy statements and findings raising concerns that some states require too many standards to be taught and measured, rather than focusing on the most important state standards for greater focus and coherence.

Because the mathematics concepts in U.S. textbooks are often weak, the presentation becomes more mechanical than ideal. We looked at both traditional and non-traditional textbooks used in the U.S. and found conceptual weakness in both.

—Ginsburg et al., 2009

The results are similar across states. Instructional materials have not followed suit. In the absence of standards that are clear, instructional materials have not followed suit.

Because conventional textbook coverage is so fractured, unfocused, superficial, and unprioritized, there is no guarantee that most students will come out knowing the essential concepts of algebra.

—Ginsburg et al., 2005, cited in CCSSM, p. 3

…Because conventional textbook coverage is so fractured, unfocused, superficial, and unprioritized, there is no guarantee that most students will come out knowing the essential concepts of algebra.

—Wiggins, 2012

For years national reports have called for greater focus in U.S. mathematics education. TIMSS and other international studies have concluded that mathematics education in the United States is a mile-wide, inch-deep curriculum that is a mile wide and an inch deep. A mile-wide, inch-deep curriculum translates to less time per topic. Less time means less depth and meaning on which many students in high-performing countries’ strong math programs build. With the advent of the Common Core, a decade’s worth of recommendations for greater focus and coherence have a chance to bear fruit. Focus and coherence are the two major evidence-based design principles of the Common Core State Standards for Mathematics. These principles are meant to fuel greater achievement by organizing math so that the subject makes sense.

For some of the sources of evidence consulted during the standards development process, see pp. 91–93 of CCSSM.

ACCT National Curriculum Survey 2009

New findings from the 2003 TIMSS and PISA

—Ginsburg et al., 2005, Reassessing U.S. International Mathematics Performance: Postsecondary success...
Focus means significantly narrowing the scope of content in each grade so that students achieve at higher levels and experience more deeply that which remains.

Coherence: think across grades, and link to major topics in each grade

Conceptual understanding, procedural skill and fluency, and the ability to apply mathematics to solve problems. Thus, the implications of the standards for mathematics education could be summarized briefly as follows:

- Focus: focus strongly where the standards focus
- Coherence: think across grades, and link to major topics in each grade
- Rigor: in major topics, pursue with equal intensity conceptual understanding, procedural skill and fluency, and the ability to apply mathematics to solve
Both of the assessment consortia have made the focus, coherence, and rigor of the Standards central to their assessment designs. Choosing materials that also embody the Standards will be essential for giving teachers and students the tools they need to build a strong mathematical foundation and succeed on the coming aligned exams.

Coherence

Coherence is about making math make sense. Mathematics is not a list of disconnected tricks or mnemonics. It is an elegant subject in which powerful knowledge results from reasoning with a small number of principles such as place value and properties of operations. The Standards define progressions of learning that leverage these principles as they build knowledge over the grades. Coherence has to do with connections between topics. Vertical connections are crucial: these are the links from one grade to the next that allow students to progress in their mathematical education. For example, in grade 1, students might add two numbers using a “count all” strategy, but grade 2 students are expected to use “counting on” and more sophisticated strategies. It is critical to think of how primary grades can be positioned to detour from the focus on arithmetic; the Standards are showing how bar graphs can be positioned to support the major work of the grade. For example, in grade 3, bar graphs are not “just another topic to cover.” The standard about bar graphs asks students to use information presented in bar graphs to solve word problems. Instead of allowing bar graphs to detract from the focus on arithmetic, the Standards are showing how bar graphs can be positioned to support the major work of the grade. In this way coherence can support focus.

Materials cannot match the contours of the Standards by approaching each individual content standard as a separate event. Nor can materials align to the Standards by approaching each individual grade as a separate event. Materials that embody the Standards have made the focus, coherence, and rigor of the Standards central to their assessment designs.
expressions with letters and later still the study of polynomials. As the application of the properties is extended over the grades, an understanding of how the properties of operations work together should deepen and develop into one of the most fundamental insights into algebra. The natural distribution of prior knowledge in classrooms should not prompt abandoning instruction in grade level content, but should prompt explicit attention to connecting grade level content to content from prior learning.

To date, curricula have not always been balanced in their approach to these three aspects of rigor.

To help students meet the expectations of the Standards, educators will need to pursue, with equal intensity, three aspects of rigor in the major work of each grade: (1) conceptual understanding, (2) procedural skill and fluency, and (3) applications. The word “fluency” is used to set explicit expectations for conceptual understanding, the word “fluency” is used to set explicit expectations for applications, and the phrase “real-world problems” and the term “modeling” are used to set explicit expectations for application of the Standards to real-world situations.
The single most important flaw in United States mathematics instruction is that the curriculum is “a mile wide and an inch deep.” This finding comes from research comparing the U.S. curriculum to high performing countries, surveys of college faculty and teachers, the National Math Panel, the Early Childhood Learning Report, and all the testimony the CCSS writers heard. The standards are meant to be a blueprint for math instruction that is more focused and coherent. Crosswalks and alignments and pacing plans and such cannot be allowed to throw away the focus and coherence and regress to the mile-wide curriculum. The criteria can be used to support activities that help communicate the shift to a more focused curriculum. The criteria can be used to shape these projects.

Using the criteria

The criteria can be used in several ways:

1. Informing purchases and adoptions. Publishers can use the criteria to help communicate the shifts in the standards to states and districts. Publishers can develop materials and tools that are more focused and coherent.

2. Working with previously purchased materials. Schools or districts evaluating materials and tools for purchase can use the criteria to test claims of alignment. States reviewing materials and tools for adoption can incorporate these criteria into their rubrics.

3. Guiding the development of materials. Publishers currently modifying their programs and tools can use the criteria to shape these projects.

4. Professional development. The criteria can be used to support activities that help teachers understand the shifts in the standards. For example, teachers can analyze existing materials to reveal how the shifts in the standards are reflected in the materials and tools they use. Teachers can then design activities that align with the standards.

The criteria for materials and tools aligned to the standards can be used in three primary ways:

1. To inform the purchase of new materials and tools. Publishers can use the criteria to help them develop materials and tools that are more focused and coherent.

2. To support the development of new materials and tools. Publishers can use the criteria to ensure that new materials and tools are more focused and coherent.

3. To support the development of materials and tools for existing programs. Publishers can use the criteria to modify existing materials and tools to better align with the standards.
In all these cases, it is recommended that the criteria for focus be attended to first. By attending first to focus, coherence and rigor may realistically develop.

The Standards do not dictate the acceptable forms of instructional resources—to the contrary, they are a historic opportunity to raise student achievement through innovation. Materials and tools of very different forms can meet the criteria, including workbooks, multi-year programs, and targeted interventions. For example, materials and tools that treat a single important topic or domain might be valuable to consider.

Alignment for digital and online materials and tools. Digital materials offer substantial promise for conveying mathematics in new and vivid ways and customizing learning. In a digital or online format, diving deeper and reaching back and forth across the grades is easy and often useful. That can enhance focus and coherence. But if such capabilities are poorly designed, focus and coherence could also be diminished. In a setting of dynamic content navigation, the navigation experience must be designed to support deep and coherent learning. In a digital or online format, navigating mathematics in new and vivid ways and customizing learning. In a digital or online format, navigating mathematics in new and vivid ways and customizing learning. In a digital or online format, navigating mathematics in new and vivid ways and customizing learning.

Digital materials that are smaller than a course can be useful. The smallest granularity for which they can be properly evaluated is a cluster of standards. These criteria can be adapted for clusters of standards or progressions within a cluster, but might not make sense for isolated standards.

Special populations. The Standards (p. 4) should be used as a guide for providing accommodations to ensure that students with special needs have the opportunity to learn and meet the same high standards. The Standards should be read as providing the full range of students to participate fully from the outset, along with appropriate accommodations to ensure maximum participation of students with special education needs. For the sake of brevity, the criteria sometimes refer to parts of the Standards using abbreviations such as 3.MD.7 (an individual content standard), MP.8 (a practice standard), G.E.8 (a cluster heading), or 4.NBT.A.2 (a domain heading).

Thus, an overarching criterion for materials and tools is that they provide supports for special populations. Descriptors of materials should consult accepted guidelines for providing these supports. For the sake of brevity, the criteria sometimes refer to parts of the Standards using abbreviations such as 3.MD.7 (an individual content standard), MP.8 (a practice standard), G.E.8 (a cluster heading), or 4.NBT.A.2 (a domain heading).

Special populations. As noted in the Standards (p. 4),
Criteria for Materials and Tools Aligned to the Standards

1. Focus on Major Work: In any single grade, students and teachers using the materials as designed spend the large majority of their time on the major work of each grade. In order to preserve the focus and coherence of the Standards, both assessment consortia have designated clusters at each grade level as major, additional, or supporting, with clusters designated as major comprising the major work of each grade. Materials devoted to major work are highly unlikely to be aligned to the Standards’ focus unless they dedicate the large majority of their time on the major work of each grade.

2. Focus on Major Work in any single grade: Students and teachers using the materials should devote at least 65% and up to approximately 85% of the class time to the major work of the grade, where that time is intended to focus particularly on that grade.

3. Focus on Major Work: In any single grade, students and teachers using the materials as designed spend the large majority of their time on the major work of each grade.

8 The materials should devote at least 65% and up to approximately 85% of the class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

For cluster-level emphases at Grades K–2, see http://www.achievethecore.org/downloads/Math%20Shifts%20and%20Major%20Work%20of%20Grade.pdf.

For domain-by-domain progressions in the Standards, see http://ime.math.arizona.edu/progressions.
### Table 1. Progress to Algebra in Grades K–8

<table>
<thead>
<tr>
<th>K</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know number names and the count sequence</td>
<td>Represent and solve problems involving addition and subtraction</td>
<td>Represent &amp; solve problems involving multiplication and division</td>
<td>Understand the place value system</td>
<td>Perform operations with multi-digit whole numbers and decimals to hundredths</td>
<td>Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers</td>
<td>Apply and extend previous understanding of operations with fractions to add, subtract, multiply, and divide rational numbers</td>
<td>Apply and extend previous understanding of operations with fractions to add, subtract, multiply, and divide rational numbers</td>
<td>Apply and extend previous understanding of operations with fractions to add, subtract, multiply, and divide rational numbers</td>
</tr>
<tr>
<td>Count to tell the number of objects</td>
<td>Understand and apply properties of operations and the relationship between addition and subtraction</td>
<td>Represent and solve problems involving addition and subtraction</td>
<td>Understand properties of multiplication and the relationship between multiplication and division</td>
<td>Generalize place value understanding for multi-digit whole numbers</td>
<td>Use equivalent fractions as a strategy to add and subtract fractions</td>
<td>Use equivalent fractions as a strategy to add and subtract fractions</td>
<td>Use equivalent fractions as a strategy to add and subtract fractions</td>
<td>Use equivalent fractions as a strategy to add and subtract fractions</td>
</tr>
<tr>
<td>Compare numbers</td>
<td>Add and subtract within 20</td>
<td>Add and subtract within 100</td>
<td>Solve problems involving the four operations, and identify &amp; explain patterns in arithmetic</td>
<td>Use place value understanding and properties of operations to perform multi-digit arithmetic</td>
<td>Apply and extend previous understandings of numbers to the system of rational numbers</td>
<td>Apply and extend previous understandings of numbers to the system of rational numbers</td>
<td>Apply and extend previous understandings of numbers to the system of rational numbers</td>
<td>Apply and extend previous understandings of numbers to the system of rational numbers</td>
</tr>
<tr>
<td>Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from</td>
<td>Work with addition and subtraction equations</td>
<td>Use place value understanding and properties of operations to add and subtract</td>
<td>Solve problems involving the four operations, and identify &amp; explain patterns in arithmetic</td>
<td>Extend understanding of fraction equivalence and ordering</td>
<td>Apply and extend previous understandings of operations to add and subtract fractions</td>
<td>Apply and extend previous understandings of operations to add and subtract fractions</td>
<td>Apply and extend previous understandings of operations to add and subtract fractions</td>
<td>Apply and extend previous understandings of operations to add and subtract fractions</td>
</tr>
<tr>
<td>Work with numbers 11-19 to gain foundations for place value</td>
<td>Extend the counting sequence</td>
<td>Understand place value</td>
<td>Relate addition and subtraction to length</td>
<td>Develop understanding of fractions as numbers</td>
<td>Build fractions from unit fractions by applying and extending previous understandings of operations</td>
<td>Build fractions from unit fractions by applying and extending previous understandings of operations</td>
<td>Build fractions from unit fractions by applying and extending previous understandings of operations</td>
<td>Build fractions from unit fractions by applying and extending previous understandings of operations</td>
</tr>
<tr>
<td>Understand place value</td>
<td>Measure lengths in standard units</td>
<td>Use place value understanding and properties of operations to add and subtract</td>
<td>Relate addition and subtraction to length</td>
<td>Measure and estimate lengths in standard units</td>
<td>Use place value understanding and properties of operations to add and subtract</td>
<td>Relate addition and subtraction to length</td>
<td>Use place value understanding and properties of operations to add and subtract</td>
<td>Use place value understanding and properties of operations to add and subtract</td>
</tr>
<tr>
<td>Use place value understanding and properties of operations to add and subtract</td>
<td>Measure lengths indirectly and by iterating length units</td>
<td>Relate addition and subtraction to length</td>
<td>Use place value understanding and properties of operations to add and subtract</td>
<td>Measure lengths indirectly and by iterating length units</td>
<td>Relate addition and subtraction to length</td>
<td>Use place value understanding and properties of operations to add and subtract</td>
<td>Measure lengths indirectly and by iterating length units</td>
<td>Relate addition and subtraction to length</td>
</tr>
</tbody>
</table>

*Indicates a cluster that is well thought of as part of a student’s progress to algebra, but that is currently not designated as Major by one or both of the assessment consortia in their draft materials. Apart from the asterisked exception, the clusters listed here are a subset of those designated as Major in both of the assessment consortia’s draft documents. ** Depends on similarity ideas from geometry to show that slope can be defined and then used to show that a linear equation has a graph which is a straight line and conversely.*
2. Focus in Early Grades: Materials do not assess any of the following topics before the grade level indicated.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Grade Introduced in the Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability, including chance, likely outcomes, probability models.</td>
<td>7</td>
</tr>
<tr>
<td>Statistical distributions, including center, variation.</td>
<td>7</td>
</tr>
<tr>
<td>Scatter plots, trend lines, line of best fit, correlation.</td>
<td>8</td>
</tr>
<tr>
<td>Similarity, congruence, or geometric transformations.</td>
<td>8</td>
</tr>
<tr>
<td>Symmetry of shapes, including line/reflection symmetry.</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: The standards indicate that materials or tools that do not include the indicated grades do not support the criteria for coherence. However, the absence of specific topics does not mean that materials must cover all topics in the standards. Materials that focus on a subset of topics in the standards can still be considered high-quality and rigorous, as long as they provide a strong foundation for students.

2. Focus on Coherence through Supporting Work: Supporting work supports the major work of the grade and enhances focus.

- Materials for K-5 generally treat data displays as an opportunity to solve grade-level word problems using the four operations (see 3.MD.3), materials for grade 7 take advantage of problems using prior operations to solve grade-level word problems (see 7.SP.3). Materials for K-5 generally feature data displays on an occasion for solving grade-level word problems.

Supporting work that does not apply in the case of targeted supplementary materials or other tools that do not include the indicated grades is for materials for grades prior to the indicated grades. (One way to meet this criterion is for materials to omit these topics entirely prior to the indicated grades.)
conceptual questions (e.g., ‘If the divisor does not change and the dividend increases, what happens to the quotient?’); and problems that involve identifying correspondences across different mathematical representations of quantitative relationships. Classroom discussion about such problems can offer opportunities to engage in mathematical practices such as constructing and critiquing arguments (MP.3). In the materials, conceptual understanding is attended to most thoroughly in those places in the content standards where explicit expectations are set for understanding or interpreting. Such problems and activities center on fine-grained mathematical concepts—place value, the whole-number product \(a \times b\), the fraction \(\frac{a}{b}\), the fraction product \((\frac{a}{b}) \times q\), expressions as records of calculations, solving equations as a process of answering a question, etc. Conceptual understanding of key mathematical concepts is distinct from applications or fluency work, and these three aspects of rigor must be balanced as indicated in the Standards.

b. Giving attention throughout the year to individual standards that set an expectation of procedural skill and fluency. The Standards are explicit where fluency is expected. Materials in grades K–6 include ample number of single-step and multi-step contextual problems with engaging applications, without losing focus on the major work of each grade. Materials in Grades K–8 include an ample number of single and multi-step problems that develop the mathematics of the grade, afford opportunities for practice, and work with extending applications without losing focus on the major work of each grade. Procedures should be linked to the major work of the grade and students should also develop proficiency in computation, which they will need to become fluent in algebra. For example, fluency in algebra can help students get past the need to manage computational details so that they can observe the mathematical structures that are relevant for the problem at hand. For more about how students develop fluency in tandem with understanding, see the Progressions for Operations and Algebraic Thinking, http://commoncoretools.files.wordpress.com/2011/05/ccss_progression_cc_oa_k5_2011_05_302.pdf and for Number and Operations in Base Ten, http://commoncoretools.files.wordpress.com/2011/04/ccss_progression_nbt_2011_04_073.pdf. Non-mathematical approaches (such as the “butterfly method” of adding fractions) compromise focus and coherence and displace mathematics in the curriculum (cf. 5.NF.1). For additional background on this point, see the remarks by Phil Daro excerpted at http://vimeo.com/achievethecore/darofocus and/or the full video, available at http://commoncoretools.me/2012/05/21/phil-daro-on-learning-mathematics-through-problem-solving/.

c. Allowing teachers and students using the materials to spend sufficient time working with engaging applications, without losing focus on the major work of each grade. Materials in grades K–8 include an ample number of single and multi-step contextual problems that develop the mathematics of the grade, afford opportunities for practice, and stretch students’ understanding of key mathematical concepts—place value, the whole-number product \(a \times b\), the fraction product \((\frac{a}{b}) \times q\), expressions as records of calculations, solving equations as a process of answering a question, etc. Classroom discussion about such problems can offer opportunities to engage in mathematical practices such as constructing and critiquing arguments (MP.3).
and students can browse a progressions.
The standards, for example, such materials might think problems and concepts so that teachers
Grade levels promote the standards’ coherence by tracking the structure and progressions in
Difficult and mute materials that allow students and/or teachers to navigate content across

the current year.

which their specific responsibility is for
resources for remediation may be provided, our previous grades’ review is clearly identifiable as
during each given grade, as opposed to substantially revisiting them marginally extending

introducing gaps in learning by omitting any content that is specified in the standards.
requirements or effectively revisiting the standards. Comprehensive materials do not
helping students meet the standards as written, rather than setting an unattainable

Transition to the grade(s) above. Rich applications cannot always be shoehorned into the mathematical topic of the day. And conceptual understanding will not always come along for free unless

Progressions in mathematics match well with those in the standards. Any discrepancies in

consistent progressions: Materials are consistent with the progressions in the standards, by (all

3) Digital and online materials with no fixed lesson flow or pacing plan are not designed for

exclusively browsing but rather should be designed to instantiate the rigor and balance

grades-by-grade progressions in materials. (Fluent and explicit learning in each grade and are clearly aimed at

progressions in mathematics match well with those in the standards. Any discrepancies in

(2) Not all three aspects of rigor always work together in materials. (Fluency requires dedicated

Additional aspects of the rigor and balance criterion.

(1) The three aspects of rigor are not always separate in materials. (Conceptual understanding

the rigor and balance criterion.

students is expected to bring to bear.

solutions in problem solving. Materials for grades 6–8 also include problems in which

b. Giving all students extensive work with grade-level problems. Differentiation is sometimes necessary, but materials often manage unfinished learning from earlier grades inside grade-level work, rather than setting aside grade-level work to reteach earlier content. Unfinished learning from earlier grades is normal and prevalent; it should not be ignored nor used as an excuse for cancelling grade level work and retreating to below-grade work. (For example, the development of fluency with division using the standard algorithm in grade 6 is the occasion to surface and deal with unfinished learning about place value; this is more productive than setting aside division and backing up.) Likewise, students who are “ready for more” can be provided with problems that take grade-level work in deeper directions, not just exposed to later grades’ topics.

c. Relating grade-level concepts explicitly to prior knowledge from earlier grades. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate new knowledge. Although students may well have learned this earlier content, they have not learned how it extends to new mathematical situations and applications. They learn basic ideas of place value, for example, and then extend them across the decimal point to tenths and beyond. This extends their knowledge of prior knowledge explicit. Thus, materials routinely integrate new knowledge with knowledge from earlier grades. Notes that cluster headings are visible shaped by CCSSM cluster headings. This means some or many of the learning objectives in the materials are visible shaped by CCSSM cluster headings, which is a stringent line, and conversely, to show that a grade level can be defined and then used to share some of the same grade-level content. The materials do not simply treat the standards as a sum of individual content standards. Instead, they are designed so that prior knowledge becomes reorganized and extended to accommodate new knowledge.

6. Coherent Connections: Materials foster coherence through connections at a single grade, where:

a. Including learning objectives that are visibly shaped by CCSSM cluster headings.

Cluster headings function like topic sentences in a paragraph in that they state the point of, and lend additional meaning to, the individual content standards that follow. Where some clusters are reorganized or extended to accommodate prior knowledge, the cluster headings are visible shaped by CCSSM cluster headings. Thus, materials routinely integrate new knowledge with knowledge from earlier grades. Notes that cluster headings are visibly shaped by CCSSM cluster headings.

b. Including problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade, in cases where those connections are natural and important.

c. Including problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade, in cases where those connections are natural and important.

d. Including problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade, in cases where those connections are natural and important.

e. Including problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade, in cases where those connections are natural and important.

f. Including problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade, in cases where those connections are natural and important.

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d. Including problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade, in cases where those connections are natural and important.

e. Including problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade, in cases where those connections are natural and important.
robust work in grade 4 should sometimes or often involve students applying their developing computation skills in the context of solving word problems detailed in OA. Materials do not invent connections not explicit in the Standards (e.g., 3.MD.7 connects area to multiplication, to addition, and to properties of operations) Not everything in the standards is naturally well connected or needs to be connected (e.g., Order of Operations has essentially nothing to do with the properties of operations, and connecting these two things in a lesson or unit title is actively misleading). Instead, connections in materials are mathematically natural and important (e.g., base-ten computation in the context of word problems with the four operations), reflecting plausible direct implications of what is written in the Standards without creating additional requirements.

8. Focus and Coherence via Practice Standards: Materials promote focus and coherence by

- Explaining the role of the practice standards in the classroom and in students’ mathematical development. Teachers also include teacher-directed materials to engage-student thinking. Materials do not invent connections that are required explicitly in the Standards (e.g., do not treat the practice standards as a separate set of instructions). Materials do not provide suggestions for delivering content in ways that help students meet the practice standards and provide specific content in relation to content within each applicable grade or grade band. Instead, each practice standard is in relation to content within each applicable grade.

Materials are accompanied by an analysis of how the authors have:

- Explained the roles of each practice standard.
- Provided mathematical models, etc.
- Provided specific content in relation to content within each applicable grade.
- Focused on the role of the practice standards in the classroom and in students’ mathematical development.

Practice standards are meaningfully present in the form of activities or problems that stimulate the practice standards. The practice standards are well-grounded in the content standards. These practices are student-developed and are expected to produce answers and solutions that are in a grade-appropriate way, appropriate.

The practice standards are not just processes with ephemeral products (such as conversation) but also specify a set of products students are supposed to learn how to produce. This supports the need to connect the mathematical practices to mathematical content in mathematics instruction.

7. Practice-Content Connections: Materials meaningfully connect content standards and practice standards.

"Designs of curricula, assessments, and professional development should all attend to the need to connect the mathematical practices to mathematical content in mathematics instruction." (CCSSM, p. 8) Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of activities or problems that stimulate the practice standard.

More intricate compound forms also exist. (For example, see A-APR.1.) It is sometimes helpful to recognize compound forms as context for a practice or practice. However, it is also sometimes helpful to recognize compound forms as context for a practice or practice. Thus, students are asked to produce answers and solutions and to do so in a grade-appropriate way, appropriate.

Materials are accompanied by an analysis of how the authors have approached each practice standard in relation to its content within each applicable grade or grade band. Instead of focusing on the practice standards, the authors have focused on the content standards and the grade or grade band.

Focus and Coherence via Practice Standards: Materials promote focus and coherence by

- Preserving the focus, coherence, and rigor of the Standards even when targeting specific practice standards.
- Making materials that are meant to guide the development of student-facing or teacher-facing materials that are meant to guide the development of student-facing or teacher-facing materials.
9. Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard. Materials thus attend first and most deliberately to those places in the content standards setting explicit expectations for materials using the materials as designed. Materials thus attend first and most deliberately to the place where the materials set the stage. Materials do not approach reasoning as a generalized imperative, but instead create opportunities for students to reason about key mathematical ideas. Thus, materials express reasoning through classroom discussion, written work and independent thinking.

### MP 3. Emphasis on Mathematical Reasoning
Materials support the Standards’ emphasis on mathematical reasoning, by (all of the following):

- Prompting students to construct viable arguments and critique the arguments of others.
- Making sense of problems and persevering in solving them.
- Looking for and expressing regularity in repeated reasoning.
- Extending patterns, or engaging in repetitive reasoning.
- Using appropriate tools strategically.
- Reasoning abstractly and quantitatively.

Materials support the Standards’ emphasis on mathematical practices, by (all of the following):

- Supporting students in constructing viable arguments and critiquing the arguments of others.
- Engaging students in reasoning abstractly and quantitatively.
- Helping students reason about key mathematics detailed in the content standards for the grade.
- Engaging students in strategic reasoning and constructing arguments.
- Engaging students in looking for and expressing regularity in repeated reasoning.
- Engaging students in expressing generalization and abstraction.

### MP 5. Emphasis on Mathematical Reasoning
Materials support the Standards’ emphasis on mathematical reasoning, by (all of the following):

- Engaging students in reasoning abstractly and quantitatively.
- Engaging students in looking for and expressing regularity in repeated reasoning.
- Engaging students in constructing viable arguments and critiquing the arguments of others.
- Engaging students in extending patterns, or engaging in repetitive reasoning.
- Engaging students in using appropriate tools strategically.
- Engaging students in reasoning abstractly and quantitatively.

### MP 6. Emphasis on Mathematical Reasoning
Materials support the Standards’ emphasis on mathematical reasoning, by (all of the following):

- Engaging students in reasoning abstractly and quantitatively.
- Engaging students in looking for and expressing regularity in repeated reasoning.
- Engaging students in constructing viable arguments and critiquing the arguments of others.
- Engaging students in extending patterns, or engaging in repetitive reasoning.
- Engaging students in using appropriate tools strategically.
- Engaging students in reasoning abstractly and quantitatively.

### MP 7. Emphasis on Mathematical Reasoning
Materials support the Standards’ emphasis on mathematical reasoning, by (all of the following):

- Engaging students in reasoning abstractly and quantitatively.
- Engaging students in looking for and expressing regularity in repeated reasoning.
- Engaging students in constructing viable arguments and critiquing the arguments of others.
- Engaging students in extending patterns, or engaging in repetitive reasoning.
- Engaging students in using appropriate tools strategically.
- Engaging students in reasoning abstractly and quantitatively.

### MP 8. Emphasis on Mathematical Reasoning
Materials support the Standards’ emphasis on mathematical reasoning, by (all of the following):

- Engaging students in reasoning abstractly and quantitatively.
- Engaging students in looking for and expressing regularity in repeated reasoning.
- Engaging students in constructing viable arguments and critiquing the arguments of others.
- Engaging students in extending patterns, or engaging in repetitive reasoning.
- Engaging students in using appropriate tools strategically.
- Engaging students in reasoning abstractly and quantitatively.

### MP 9. Emphasis on Mathematical Reasoning
Materials support the Standards’ emphasis on mathematical reasoning, by (all of the following):

- Engaging students in reasoning abstractly and quantitatively.
- Engaging students in looking for and expressing regularity in repeated reasoning.
- Engaging students in constructing viable arguments and critiquing the arguments of others.
- Engaging students in extending patterns, or engaging in repetitive reasoning.
- Engaging students in using appropriate tools strategically.
- Engaging students in reasoning abstractly and quantitatively.

### MP 10. Emphasis on Mathematical Reasoning
Materials support the Standards’ emphasis on mathematical reasoning, by (all of the following):

- Engaging students in reasoning abstractly and quantitatively.
- Engaging students in looking for and expressing regularity in repeated reasoning.
- Engaging students in constructing viable arguments and critiquing the arguments of others.
- Engaging students in extending patterns, or engaging in repetitive reasoning.
- Engaging students in using appropriate tools strategically.
- Engaging students in reasoning abstractly and quantitatively.

### MP 11. Emphasis on Mathematical Reasoning
Materials support the Standards’ emphasis on mathematical reasoning, by (all of the following):

- Engaging students in reasoning abstractly and quantitatively.
- Engaging students in looking for and expressing regularity in repeated reasoning.
- Engaging students in constructing viable arguments and critiquing the arguments of others.
- Engaging students in extending patterns, or engaging in repetitive reasoning.
- Engaging students in using appropriate tools strategically.
- Engaging students in reasoning abstractly and quantitatively.
Students are asked to critique given arguments, e.g., by explaining under what conditions, if any, a mathematical statement is valid. Materials develop students’ capacity for mathematical reasoning in a grade-level appropriate way, with a reasonable progression of sophistication from early grades up through high school.17 Teachers and students using the materials as designed spend significant classroom time communicating reasoning (by constructing viable arguments and critiquing the arguments of others) and working on applications and practicing procedures. Materials provide examples of student explanations and arguments (e.g., fictitious student characters might be introduced). They also include interactions to help with comprehension of worthwhile, accessible, and challenging grade-level problems and mathematical explanations are developed in material designed for instructional, problem-solving, and mathematical explanations are developed in materials designed for language development. The language of mathematics and academic language associated with the standards. The language of mathematics and academic language is developmentally appropriate, helping students to access challenging mathematics. The text is considerate of English Language Learners, helping them to access challenging mathematics. The materials attend thoroughly to the specialized language of mathematics. Explicitly attesting to the specialized language of mathematics: Mathematical Reasoning.


c. Explicitly attending to the specialized language of mathematics: Mathematical Reasoning.

Teachers and students using the materials as designed spend significant classroom time communicating reasoning (by constructing viable arguments and critiquing the arguments of others) and working on applications and practicing procedures. Materials provide examples of student explanations and arguments (e.g., fictitious student characters might be introduced). They also include interactions to help with comprehension of worthwhile, accessible, and challenging grade-level problems and mathematical explanations are developed in material designed for language development. The language of mathematics and academic language is developmentally appropriate, helping students to access challenging mathematics. The text is considerate of English Language Learners, helping them to access challenging mathematics. The materials attend thoroughly to the specialized language of mathematics: Mathematical Reasoning.

17 As students progress through the grades, their production and comprehension of mathematical arguments evolve from informal and concrete toward more formal and abstract. In early grades, language includes expressions with words that are written in a way that is accessible to students but may require some practice in reading and writing to understand the mathematical concepts they represent. These expressions are developed and refined through conversations and written explanations. As students develop their understanding of mathematical concepts, they are encouraged to use more precise and abstract language to communicate their ideas. This progression helps students to develop their ability to reason about mathematical concepts and communicate their understanding effectively.
Lack of alignment in these subjects could have the effect of compromising the focus and coherence of the mathematics Standards. Instead of reinforcing concepts and skills already carefully introduced in math class, teachers of science and technical subjects would have to teach this material in stopgap fashion. That wouldn’t serve students well in any grade, and elementary teachers in particular would preside over a chaotic learning environment.

Consistency with CCSSM: Materials for science and technical subjects are consistent with CCSSM. Materials for these subjects in K–8 do not outpace the focus and coherence of the CCSSM, whereas materials in grades 6–8 do.

### Table 3

#### Algebraic competencies integrated into materials for middle school science and technical subjects

- Working with positive and negative numbers (including fractions)
- Using variables and writing and solving equations
- Recognizing and using proportional relationships
- Graphing proportional relationships and linear functions to solve problems
- Working with distributions and measures of center
- Working with two-way tables
- Working with simple probability and random sampling
- Working with simple proportions and linear functions

#### Statistical competencies integrated into materials for middle school science and technical subjects

- Working with distributions and measures of center
- Working with simple probability and random sampling
- Working with two-way tables
- Working with simple proportions and linear functions
- Using variables and writing and solving equations
- Including functions (to solve problems)
- Working with positive and negative numbers

---

A criterion for the mathematics and statistics in materials for science and technical subjects...
Indicators of quality in instructional materials and tools for mathematics

- The preceding criteria express important dimensions of alignment to the Standards. The following are some additional dimensions of quality that materials and tools should exhibit in order to give teachers and students tools they need to meet the Standards:

  1. Problems in the materials are worth doing:
     - The underlying design of the materials distinguishes between problems and exercises. Explanations about why problems make sense, how quantities are represented in expressions, etc. are applicable to the grade level. Standards are aligned to use anchor problems and develop, but also, in a grade-appropriate way, arguments, explanations, diagrammatic mathematical models.
     - There is variety in what students produce: Students are asked to produce answers and solutions, and how elements of symbolic, diagrammatic, tabular, graphical, and/or verbal representations correspond.

  2. Materials that devote roughly equal time to each content standard do not allow teachers and students to focus where necessary.

  3. The Standards are not written at uniform grain size; sometimes an individual content standard

  4. The language in which problems are posed is carefully considered. Note that mathematical problems posed using ordinary language are a special genre of text that has conventions and structures needed to be learned. The language used to pose mathematical problems should evolve with the grade level and across mathematics content.

  5. There is variety in the pacing and grain size of content coverage.

  6. Problems in the materials are worth doing.
Lessons are thoughtfully structured and support the teacher in leading the class through the learning paths at hand, with active participation by all students in their own learning and in the learning of their classmates. Teachers are supported in extending student explanations and modeling explanations of new methods. Lesson structure frequently calls for students to find solutions, explain their reasoning, and ask and answer questions about their reasoning as it concerns problems, diagrams, mathematical models, etc. Over time there is a rhythm back and forth between making sense of concepts and exercising for proficiency.

There are separate teacher materials that support and reward teacher study, including:

- Discussion of the mathematical ideas of the unit and the mathematical objectives they represent.
- Guidance on lesson flow.
- Guidance on interaction with students, mostly questions to prompt ways of thinking.
- Discussion of student ways of thinking and how these relate to the organizing concepts of the unit.
about doing it in English.)

might choose to think about and discuss the problems in their first language, and then worry
when working in pairs. If ELLs are paired up with a student who shares the same language, they
might not have problem sharing orally with a small group or in pairs. (In addition,
structure interactions in pairs, in small groups, and in the large group (or in any other group
confrontation), as some English language learners might be shy to share orally with the large
instruction will give them the support they need to meet their academic goals. Materials can
learn and show understanding in an environment where English is used as the medium of
standards as all other students. Allowing English language learners to collaborate as they strive to
Support for English language learners is thoughtful and helps those learners to meet the same

The visual design isn’t distracting or chaotic, or aimed at adult purchasers, but instead serves only

- Freedom from unnecessary language complexity
- Freedom from bias (for example, problems contexts that use culture-specific background
knowledge do not assume readers from all cultures have that knowledge; simple explanations
of illustrations or hints scaffold comprehension)
You have just purchased an expensive Grecian urn and asked the dealer to ship it to your house. He picks up a hammer, shatters it into pieces, and explains that he will send one piece a day in an envelope for the next year. You object; he says “don’t worry, I’ll make sure that you get every single piece, and the markings are clear, so you’ll be able to glue them all back together. I’ve got it covered.” Absurd, no? But this is the way many school systems require teachers to deliver mathematics to their students; one piece (i.e. one standard) at a time. They promise their customers (the taxpayers) that by the end of the year they will “cover” the standards.

In the Common Core State Standards, individual statements of what students are expected to understand and be able to do are embedded within domain headings and cluster headings designed to convey the structure of the subject. “The Standards” refers to all elements of the design—the wording of domain headings, cluster headings, and individual statements; the text of the grade level introductions and high school category descriptions; the placement of the standards for mathematical practice at each grade level; and the pieces are designed to fit together, presenting a coherent whole where the connections within grades and the flows of ideas across grades are as visible as the story depicted on the urn.

The analogy with the urn only goes so far; the Standards are a policy document, after all, not a work of art. In common with the urn, however, the Standards were crafted to reward study on multiple levels: from close inspection of details, to a coherent grasp of the whole. Specific phrases in specific standards are worth study and can carry important meaning; yet this meaning is also importantly shaped by the cluster heading in which the standard is found. At higher levels, domain headings give structure to the subject matter of the discipline, and the practices’ yearly refrain communicates the varieties of expertise which study of the discipline develops in an educated person.

Fragmenting the Standards into individual standards, or individual bits of standards, erases all these relationships and produces a sum of parts that is decidedly less than the whole. Arranging the Standards into new categories also breaks their structure. It constitutes a remixing of the Standards, changing the way the connections are made, and the meaning contained in the numbered statements beneath them. Remove or reword those headings and you have changed the meaning of the Standards; you now have adopted the Common Core.

Sometimes a remix is good as or better than the original. Maybe there are 50 remixes, adapted to the preferences of each individual state (although we doubt there are 50 good ones). But that is it; to the performers of each individual state (although we doubt there are 50 good ones). Be that as it may, a remix of a work is not the same as the original work, and with 50 remixes we would not have the coherent whole that the original work promised. This finding comes from research comparing the U.S. curriculum to those of high-performing countries, surveys of teachers, and interviews with some of the world’s leading mathematics educators. The findings are stark and unsettling: the curriculum is “a mile wide and an inch deep.” This is why paying attention to the structure is important; it is why “The single most important law of mathematics education is the structure of the curriculum.”

By the end of the year, we believe “covered” will have no meaning in the standards. The pieces are designed to fit together, and the standards document presents them together, making the structure of the discipline evident. This is why the Standards are a policy document, not an end in and of itself. Why is paying attention to the structure important? Here is why: the single most important law of mathematics education is the structure of the curriculum. This is why the Standards are a policy document, not an end in and of itself. Why is paying attention to the structure important? Here is why: the single most important law of mathematics education is the structure of the curriculum.

Essay by Phil Daro, William McCallum, and Jason Zimba, February 16, 2012

The Structure is the Standards

Appendix
The standards are meant to be a blueprint for math instruction that is more focused and coherent. The focus and coherence in this blueprint is largely in the way the standards progress from one another, coordinate with each other and most importantly cluster to form coherent bodies of knowledge. Crosswalks and alignments and pacing plans and such cannot be allowed to throw away the focus and coherence and regress to the mile-wide curriculum.

Another consequence of fragmenting the Standards is that it obscures the progressions in the standards. The standards were not so much assembled out of topics as woven out of progressions. Maintaining these progressions in the implementation of the standards will be important for helping all students learn mathematics at a higher level.

This is basic condition of teaching and should not be ignored in the name of standards. Nearly every student has more to learn about the mathematics referenced by standards from earlier grades.

Understanding student thinking:

The growth chart in a doctor’s office: they provide a reference point, but no child follows the chart exactly. By the same token, standards provide a chart against which to measure children’s knowledge. As children grow, it is important for teachers to see how the properties of operations developed in earlier grades are being used and applied.

A central role in understanding operations with negative numbers, expressions with variables, and the study of polynomials is the application of the properties of operations. Properties of operations are used to simplify whole number, integer, rational number, and algebraic expressions.

Another concern of fragmenting the Standards is that it obscures the progressions in the mathematics. While the focus on the standards is largely in the way they are coming from, and group of students are coming from, and the nature of the mathematics that underlies new learning is about extending knowledge from grade to grade, it is the nature of the mathematics that underlies new learning is about extending knowledge from grade to grade.

This is basic condition of teaching and should not be ignored in the name of standards. Nearly every student has more to learn about the mathematics referenced by standards from earlier grades.
These Standards reflect the collective expertise of hundreds of teachers, education researchers, mathematicians, and state content experts from across the country. The Standards represent the collective expertise of these stakeholders and state governors. The Standards reflect the collective expertise of these stakeholders and state governors. The Standards reflect the collective expertise of these stakeholders and state governors. The Standards represent the collective expertise of these stakeholders and state governors. The Standards represent the collective expertise of these stakeholders and state governors. The Standards reflect the collective expertise of these stakeholders and state governors. The Standards reflect the collective expertise of these stakeholders and state governors. The Standards reflect the collective expertise of these stakeholders and state governors. The Standards represent the collective expertise of these stakeholders and state governors. 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Focus, Coherence, and Rigor in the High School Standards

This finding that postsecondary instructors target fewer skills as being of high importance is consistent with recent policy statements and findings raising concerns that some states require too many standards to be taught and measured, rather than focusing on the most important state standards for students to attain.

Because the postsecondary survey results indicate that a more rigorous treatment of fundamental content knowledge and skills needed for credit-bearing college courses would better prepare students for postsecondary school and work, states would likely benefit from examining their state standards and, where necessary, reducing them to focus only on the knowledge and skills that research shows are essential to college and career readiness and postsecondary success.

With the advent of the Common Core, a decade’s worth of recommendations for greater focus and coherence have a chance to bear fruit. Focus and coherence are the two major evidence-based design principles of the Common Core State Standards for Mathematics. These principles are meant to fuel greater achievement by guiding what students learn at each grade level and what skills and knowledge they need to succeed in college and career. Focus and coherence are especially important in mathematics because the subject is so cumulative.

Moreover, prior to the Common Core, state standards were making little progress in terms of coherence. In the absence of standards shared across states, instructional materials have not followed suit. The U.S. has lacked such discipline and patience.

Countries that focus on fewer concepts and support greater progressions—like Singapore, Japan, and South Korea—areAus simpler, more focused, and more rigorous curriculum.

Coherence: states were not leading achievement by focusing math so that the subject makes sense.

For years national reports have called for greater focus in U.S. mathematics education. TIMSS and other international studies have concluded that mathematics education in the United States is a mile-wide inch-deep curriculum translates to less time per topic. Less time means less depth and moving on without many students in high-performing countries, strong foundations are laid and then further knowledge is built on them; the design principle in those other international studies has considered that mathematical education in the United States is a mile-wide, inch-deep curriculum, which is reflected in the postsecondary survey results. The results indicate that a more rigorous treatment of fundamental content knowledge and skills needed for credit-bearing college courses would better prepare students for postsecondary school and work.

Moreover, prior to the Common Core, state standards were making little progress in terms of coherence: states were not fueling achievement by organizing math so that the subject makes sense.

The U.S. has lacked such discipline and patience. Focus and coherence are the two major evidence-based design principles of the Common Core State Standards for Mathematics. These principles are meant to fuel greater achievement by guiding what students learn at each grade level and what skills and knowledge they need to succeed in college and career.

There is evidence that state standards have become somewhat more focused over the past decade. But in the absence of standards shared across states, instructional materials have not followed suit. The U.S. has lacked such discipline and patience. Focus and coherence are especially important in mathematics because the subject is so cumulative.

Countries that focus on fewer concepts and support greater progressions—like Singapore, Japan, and South Korea—areEducational materials in those countries are more focused, and not only on the content, but also on the skills and knowledge that students need to succeed in college and career. Focus and coherence are the two major evidence-based design principles of the Common Core State Standards for Mathematics. These principles are meant to fuel greater achievement by guiding what students learn at each grade level and what skills and knowledge they need to succeed in college and career.

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Focus

Focus in high school is important in order to prepare students for college and careers. National surveys have repeatedly concluded that postsecondary instructors value greater mastery of a smaller set of prerequisites over shallow exposure to a wide array of topics, so that students can build on what they know and apply what they know to solve substantial problems. A college-ready curriculum including all of the standards without a (+) symbol in High School should devote the majority of students’ time to building the particular knowledge and skills that are most important as prerequisites for a wide range of college majors, postsecondary programs, and careers.

Coherence

Coherence is about making things make sense. Mathematics is not a list of disconnected tricks or mnemonics. It is an elegant subject in which powerful knowledge results from reasoning with a small number of principles. Special attention of the mile-wide inch-deep problem in high school is that there are often too many separately memorized techniques, with no overall structure to the them. Coherence is about making math make sense. Picture teachers and students:

Picture teachers and students could allow for micromanagement: Picture teachers and students would also like easier for misconceptions and micromanagement to drive our instruction and deep, microstandards, risks making the checklist mentality even worse than it is today. Microstandards, micromanagement, and micromastery are often too many separately memorized techniques, with no overall structure to the them. Coherence is needed to help them understand that helps them reason constructively. Picture teachers and students who have an understanding that helps them reason constructively.

Picture teachers and students who can see that the distance formula and the trigonometric identity sin²(θ) + cos²(θ) = 1 are both manifestations of the Pythagorean theorem. They have an understanding that helps them reconstruct these formulas and not just memorize them temporarily. In order to help teachers and curriculum developers see coherence, the High School content standards in the Algebra and Functions categories are arranged under headings like “Seeing Structure in Expressions and Building Functions.”

Coherence: Focus strongly where the standards focus

Coherence: Think across grades/courses, and link to major topics in each course

Rigor

In major topics, pursue with equal intensity

- conceptual understanding,
- procedural skill and fluency,
- applications

Focus: Coherence, Think across grades/courses, and link to major topics in each course.
focus—otherwise we are asking teachers and students to do more with less. Compromises of rigor in the major work of each grade. Of course, that makes it necessary that we be held accountable for ever more discrete performances. If it is bad today when principals force teachers to write the standard of the day on the board, think of how it would be if every single standard turns into three, six, or a dozen or more microstandards. If the Standards are like a tree, then microstandards are like twigs. You can't build a tree out of twigs, but rather they set high expectations for all three.

Rigor

To help students meet the expectations of the Standards, educators will need to pursue, with equal intensity, three aspects of rigor: (1) conceptual understanding, (2) procedural skill and fluency, and (3) applications. The Standards for Mathematical Practice set expectations for using mathematical language and representations for reasoning, solving problems, and modeling. These expectations are related to fluency: precision in the use of language, seeing structure in expressions, and reasoning from the concrete to the abstract. High School mathematics builds new and more sophisticated fluencies on top of the earlier fluencies from K-8 that centered on numerical calculation.

The Standards do not set explicit expectations for fluency, but fluency is important in high school mathematics. The High School content standards do not set explicit expectations for fluency, but fluency is important in high school.

The word "micro" isn't a code word for just one of these three categories. Rather, it means equal importance in all three: (1) conceptual understanding and the phrases "real-world problems" and "modeling" are used to set expectations for the Standards; (2) procedural skill and fluency, and (3) applications. The word "micro" isn't a code word for just one of these three categories. Rather, it means equal importance in all three: (1) conceptual understanding and the phrases "real-world problems" and "modeling" are used to set expectations for the Standards; (2) procedural skill and fluency, and (3) applications.

Rigor

Kindling to burn down a tree.

The Standards do not take sides in these ways, but rather they set high expectations for all three.
II. Criteria for Materials and Tools Aligned to the High School Standards

Students deserve pathways to college designed as preparation, not as obstacle courses.


One approach to developing a document such as this one would have been to develop a separate criterion for each mathematical topic approached in deeper ways in the Standards, a separate criterion for each of the Standards for Mathematical Practice, etc. It is indeed necessary for textbooks to align to the Standards in detailed ways. However, enumerating those details here would have led to a very large number of criteria. Instead, the criteria use the Standards' focus, coherence, and rigor as the main themes. In addition, this document includes a section on indicators of quality in materials and tools, and tools for working with previously purchased materials. Publishers can use the criteria to test claims of alignment. Schools or districts evaluating materials and tools for purchase can use the criteria to design diagnostic tools to assess how well materials meet the Standards. Publishers can use the criteria to develop materials that help communicate the Standards' focus, coherence, and rigor. Schools or districts can use the criteria to design materials that help students focus on the Standards' focus, coherence, and rigor.

The criteria can be used in several ways:

- **Professional development.** The criteria can be used to support activities that help teachers and leaders understand how to focus materials and tools on the Standards' focus, coherence, and rigor.
- **Guiding the development of materials.** Publishers can use the criteria to shape their programs and materials.
- **Working with previously purchased materials.** Most existing materials and tools likely fail to meet one or more of these criteria, even in cases where alignment to the Standards is claimed. But the pattern of failure is informative. States and districts need not wait for "the perfect book" to arrive, but can use the criteria to carry out a thoughtful plan to modify or combine existing materials in such a way that students' actual learning experiences approach the Standards.
- **Informing purchases and adoptions.** Schools or districts can use the criteria to design materials that help students focus on the Standards' focus, coherence, and rigor.

The Standards do not dictate the acceptable forms of instructional resources to the contrary, they offer opportunities to raise student achievement through innovation. Materials and tools can be very different forms of instructional resources—this document includes a separate criterion for each mathematical topic approached in deeper ways in the Standards, a separate criterion for the criteria for each of the Standards for Mathematical Practice, etc. It is indeed necessary for textbooks to align to the Standards in detailed ways.
mathematics while meeting focus and rigor as well. Standards should ensure that the sequence of the courses does not break apart the coherence of the organization of high school courses. However, curriculum materials and tools based on a course and grade level need to be developed to support high school standards. The High School Standards do not mandate the sequence or order of courses to be followed by students. All students must have the opportunity to learn and meet the same high standards if they are to access the knowledge and skills necessary in their post-school lives. The Standards should be flexible enough to accommodate the needs of students to participate fully in the college, career, and civic life that awaits them.

\* For the sake of brevity, the criteria sometimes refer to parts of the Standards using abbreviations such as A.REI (a domain heading), N.Q (a cluster heading), or F.BF.A (a cluster heading). Readers of the document should have a copy of the Standards available in order to refer to the indicated text in each case.

4 Slides from a brief and informal presentation by Phil Daro about mathematical language and English language learners can be found at http://db.tt/VARV3ebl.
This criterion also applies to digital or online materials without fixed pacing plans. Such tools are explicitly designed for focus, so that students spend the majority of their time on widely applicable work.

Table 1 lists clusters and standards with especially wide applicability across a range of postsecondary work. Table 1 is a subset of the material students must study to be college and career ready (CCSSM, pp. 57, 84). But to meet this criterion, materials must give especially careful treatment to the domains, clusters, and standards in Table 1, including their interconnections and applications—amounting to a majority of students’ time.

The standards necessary for calculus and other advanced courses are included in the standards in Table 1. Students for STEM majors must learn all of the prerequisites in students for STEM majors. Materials and postsecondary programs that are most applicable and prerequisite devoted to building the particular knowledge and skills that are most applicable and prerequisite include all of the standards in high school without a (+) symbol, with a majority of the time devoted to building the particular knowledge and skills that are most widely applicable to the majority of their time developing knowledge and skills that are widely applicable.

Criteria for Materials and Tools Aligned to the Standards

1. **Focus on Widely Applicable Prerequisites:** In any single course, students using the materials as
Table 1. Content From CCSSM Widely Applicable as Prerequisites for a Range of College Majors, Postsecondary Programs and Careers*

<table>
<thead>
<tr>
<th>Number and Quantity</th>
<th>Algebra</th>
<th>Functions</th>
<th>Geometry</th>
<th>Statistics and Probability</th>
<th>Applying Key Takeaways from Grades 6–8**</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-RN, Real Numbers: Every domain in this category contains widely applicable prerequisites.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Solving problems at a level of sophistication appropriate to high school by:</td>
</tr>
<tr>
<td>N-Q*, Quantities: Every standard in this domain is a widely applicable prerequisite. Note, this domain is especially important in the high school content standards overall as a widely applicable prerequisite.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Applying ratios and proportional relationships.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Applying percentages and unit conversions, e.g., in the context of complicated measurement problems involving quantities with derived or compound units (such as mg/mL, kg/m³, acre-feet, etc.).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Applying basic function concepts, e.g., by interpreting the features of a graph in the context of an applied problem.</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>• Applying concepts and skills of geometric measurement e.g., when analyzing a diagram or schematic.</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>• Applying concepts and skills of basic statistics and probability (see 6-8.SP).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Performing rational number arithmetic fluently.</td>
</tr>
</tbody>
</table>

A note about the codes: Letter codes (A, B, C) are used to denote cluster headings. For example, G-SRT.B refers to the second cluster heading in the domain G-SRT, “Prove theorems using similarity” (pp. 77 of CCSSM).


** See CCSSM, p. 84: “...some of the highest priority content for college and career readiness comes from Grades 6-8. This body of material includes powerfully useful proficiencies such as applying ratio reasoning in real-world and mathematical problems, computing fluently with positive and negative fractions and decimals, and solving real-world and mathematical problems involving angle measure, area, surface area, and volume.”

* Modeling star (present in CCSSM)

* Only the standards without a (+) sign are being cited here.
Rigor and Balance: Materials and tools reflect the balances in the Standards and help students meet the Standards’ rigorous expectations, by (all of the following, in the case of comprehensive materials; at least one of the following for supplemental or targeted resources):

a. Developing students’ conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings. Materials amply feature high-quality conceptual problems and questions. This includes brief conceptual problems with low computational difficulty (e.g., ‘What is the maximum value of the function \( f(t) = 5 - t^2 \)?’); brief conceptual questions (e.g., ‘Is \( \sqrt{a} \) a polynomial? How about \( (\sqrt{a})(\sqrt{b}) \)?’); and problems that involve identifying correspondences across different mathematical representations. Classroom discussion about such problems can offer opportunities to engage in mathematical practices such as constructing and critiquing arguments (MP.3). In the materials, conceptual understanding is attended to most thoroughly in those places in the content standards where explicit expectations are set for understanding fundamental mathematical concepts, such as the correspondence between an equation and its graph, solving equations as a process of answering a question, analyzing a nonlinear equation \( f(x) = g(x) \) by graphing \( f \) and \( g \) on a single set of axes, etc. Classroom discussion about such problems can offer opportunities to engage in mathematical practices such as constructing and critiquing arguments (MP.3).

b. Giving attention throughout the year to procedural skill and fluency. In higher grades, algebra is the language of much of mathematics. Like learning any language, we learn by using it. Sufficient practice with algebraic operations is provided so as to make realistic the attainment of the Standards as a whole; for example, fluency in algebra can help students get past the need to manage computational details so that they can observe structure (MP.7) and use properties of operations (MP.8). Progress toward procedural skill and fluency is interwoven with students developing conceptual understanding of the operations in question.

a. Overview of Key Mathematical Concepts

Comprehensive materials:

- Meet the Standards’ rigorous expectations by (all of the following, in the case of comprehensive materials; at least one of the following for supplemental or targeted resources):
- Focus that for all students, multiple representations are used so as multiple access paths.
Allowing teachers and students using the materials as designed to spend sufficient time working with engaging applications/modeling. Materials include an ample number of contextual problems that develop the mathematics of the course, afford opportunities for practice, and engage students in problem solving. Materials also include problems in which students must make their own assumptions or simplifications in order to model a situation mathematically. Applications take the form of problems to be worked on individually as well as classroom activities centered on application scenarios. Materials attend thoroughly to those places in the content standards where expectations for multi-step and real-world problems are explicit. Students learn to use the content knowledge and skills specified in the content standards in applications, with particular stress on applying widely applicable work. Problems and activities show a sensible blend between the sophistication of the problem and the difficulty of novelty of the content knowledge the student is expected to bring to bear. Yet still be a high-school level problem because of the strategic competence required.

At the college and career readiness level, applications will not always come alone for the majority of the topic of the day (K-12, Table 1.3). Nor are they always separate. Applications can build conceptual understanding that cannot be predicted in the context of applications, and brief and frequent pop quizzes can help to build conceptual understanding. (Conceptual understanding is an important part of the modeling cycle presented in CCSSM, pp. 72.) Finally, students can build conceptual understanding with digital and online materials, with more elements of the modeling cycle present (CCSSM, p. 72). Therefore, modeling is prominent and enhanced in high-school-level problems that involve applying key concepts to real-world situations. The evidence concerning college and career readiness shows clearly that the knowledge, skills, and practices important for college and career readiness require a great deal of mathematical rigor to be powerfully and effectively translated in problem solving (+) symbols in these standards. Indeed, some of the highest-quality content of college and career readiness comes from grades 6-8. This body of material includes powerful applications and classroom activities centered on application scenarios that develop the mathematics of the course and afford opportunities for practice, and engage students in problem solving. Materials also include problems in which students must make their own assumptions or simplifications in order to model a situation mathematically. Applications take the form of problems to be worked on individually as well as classroom activities centered on application scenarios. Materials attend thoroughly to those places in the content standards where expectations for multi-step and real-world problems are explicit. Students learn to use the content knowledge and skills specified in the content standards in applications, with particular stress on applying widely applicable work. Problems and activities show a sensible blend between the sophistication of the problem and the difficulty of novelty of the content knowledge the student is expected to bring to bear.
3. Consistent Content: Materials are consistent with the content in the Standards, by (all of the following):

a. Basing courses on the content specified in the Standards. Content in materials matches well with the mathematics specified in the Standards for Mathematical Content. (This does not require the table of contents in a book to be a replica of the content standards.) Any discrepancies in high school content that have been learned this earlier content are clearly aimed at helping students meet the Standards as written, rather than setting up competing requirements or effectively rewriting the standards. Comprehensive materials do not introduce gaps in learning by omitting any content without a (+) symbol that is specified in the standards.

b. Giving all students extensive work with course-level problems. Previous-grades review and previous-course review is clearly identified as such to the teacher, and teachers and students can browse a cluster.

These materials are designed so that prior knowledge becomes organizational and extended to accommodate the new knowledge. Course-level problems in the materials often involve extending knowledge from earlier grades and courses. Likewise, students who are “ready for more” can be provided with problems that take course-level work in deeper directions, not just exposed to later course topics.

c. Relating course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes organizational and extended to accommodate the new knowledge. Thus, materials routinely include new extensions of prior knowledge explicitly. This makes sense extensions of prior knowledge explicit. Thus, materials routinely include new extensions of prior knowledge explicitly. This makes sense extensions of prior knowledge explicit. Thus, materials routinely include new extensions of prior knowledge explicitly. This makes sense extensions of prior knowledge explicit. Thus, materials routinely include new extensions of prior knowledge explicitly. This makes sense extensions of prior knowledge explicit. Thus, materials routinely include new extensions of prior knowledge explicitly. This makes sense extensions of prior knowledge explicit. Thus, materials routinely include new extensions of prior knowledge explicitly. This makes sense extensions of prior knowledge explicit.
4. Coherent Connections: Materials foster coherence through connections in a single course, where appropriate and where required by the Standards, by (all of the following):

   a. Including learning objectives that are visibly shaped by CCSSM cluster and domain headings. Cluster or domain headings in High School standards function like topic sentences in a paragraph in that they state the point of, and lend additional meaning to, the individual content standards that follow. Cluster or domain headings in High School also sometimes signal important content-practice connections, e.g., “Seeing Structure in Expressions” connects expressions to MP.7 and “Reasoning with Equations and Inequalities” connects solving to MP.3. Hence an important criterion for coherence is that some or many of the learning objectives in the materials are visibly shaped by CCSSM cluster or domain headings.

   b. Including problems and activities that serve to connect two or more clusters in a domain, two or more domains in a category, or two or more categories, in cases where these connections are mathematically natural and important. This criterion applies to student-facing and teacher-facing materials as well as to architectural documents or digital or print materials that are not students.

   c. Preserving the focus, coherence, and rigor of the Standards even when targeting specific objectives. Sometimes a content standard is a compound statement, such as 3.OA.8, and it is sometimes helpful to break it into two or more domains in a category, or two or more categories, in cases where these domains or categories are naturally and important.

5. Practice-Content Connections: Materials meaningfully connect content standards and practice standards.

   a. Students and individual practice standards. The learning objectives in the materials are visibly shaped by CCSSM cluster or domain headings. Coherent materials foster coherence through connections in a single course, where applicable and where required by the Standards, by (all of the following):

     1. Coherent Connections: Materials foster coherence through connections in a single course, where applicable and where required by the Standards, by (all of the following):
The practice standards are not just processes with ephemeral products (such as conversations). They also specify a set of products and solutions but also in a course-appropriate way, arguments, explanations, diagrams, mathematical models, etc.

Materials are accompanied by an analysis aimed at evaluators of how the authors have approached each practice standard in relation to content within each applicable course and provided suggestions for delivering content in ways that help students meet the practice standards in course-appropriate ways. Materials tailor the connections to the content of the grade and to course-level-appropriate student thinking. Materials also include teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.

6. Focus and Coherence via Practice Standards: Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. Content and practice standards are not connected mechanistically or randomly, but instead support focus and coherence. Examples: Materials connect looking for and making use of structure (MP.7) with structural themes emphasized in the standards, such as purposefully transforming expressions, linking the structure of an expression to a feature of its context, grasping the behavior of a function defined by an expression, etc.; materials use looking for and expressing regularity in repeated reasoning (MP.8) to shed light on algebra and functions, e.g., by summarizing repeated numerical examples in the form of equations or in the form of recursive expressions that define structural themes emphasized in the standards, such as repeatedly transforming expressions, repeated reasoning with the slope formula to writing equations for straight lines in various forms.

7. Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard. For example, MP.1 does not say, “Solve problems,” or “Make sense of problems and solve them.” It says “Make sense of problems and persevere in solving them.” Thus, students using the materials as designed build their perseverance in course-appropriate ways by occasionally solving problems that require them to persevere to a solution beyond the point when they would like to give up. MP.5 does not say, “Use tools.” Or “Use appropriate tools.” It says “Use tools strategically.” Or “Engage in repeated reasoning.” Or “Use tools.” Or “Use appropriate tools.” Or “Engage in repeated reasoning.” Thus, repeated calculations must lead to an insight (e.g., “When substitute x = k for x in a function f(x), where k is any number, the result is a horizontal translation of the graph of f(x) to the right k units.”) rather than relying on memorizing all those forms in isolation.
constant, the graph of the function shifts $k$ units to the right."

The analysis for evaluators explains how the full meaning of each practice standard has been attended to in the materials. The full meaning of each practice standard includes the development of mathematical reasoning and multiple representations including argument, problem solving, and mathematical expressions that are taught rather than assumed. Materials support the Standards' emphasis on mathematical reasoning, by (all of the following):

a. Prompting students to construct viable arguments and critique the arguments of others concerning key course-level mathematics that is detailed in the content standards (cf. MP.3). Materials provide sufficient opportunities for students to reason mathematically and express reasoning through classroom discussion, written work, and independent thinking. Reasoning is not confined to optional or avoidable sections of the materials but is inevitable when using the materials as designed. Materials do not approach reasoning as a generalized imperative, but instead create opportunities for students to reason about key mathematics detailed in the content standards. Materials thus attend first and most thoroughly to those places in the content standards setting explicit expectations for explaining, justifying, showing, or proving. Students are asked to critique given arguments, e.g., by explaining under what conditions, if any, a mathematical statement is valid. Teachers and students using the materials as designed spend significant classroom time communicating reasoning (by constructing viable arguments and critiquing the arguments of others concerning key grade-level mathematics) — recognizing that learning mathematics also involves time spent working on applications and practicing procedures.

b. Engaging students in problem solving as a form of argument. Materials attend thoroughly to those places in the content standards that explicitly set expectations for multi-step problems; multi-step problems are not scarce in the materials. Some or many of these problems require students to devise a strategy autonomously. Sometimes the goal is the final answer alone (cf. MP.1); sometimes the goal is to lay out the solution as a sequence of well-justified steps. In the latter case, the solution to a problem takes the form of a coherent argument that can be verified and critiqued. Sometimes the goal is to justify the solution as a sequence of well-justified steps. In either case, the solution is the final answer (cf. MP.3). Students should develop a strategy autonomously. Students should recognize that learning mathematics involves mathematical reasoning.

c. Explicitly attending to the specialized language of mathematics. Reasoning involves specialized language that students should attend to and work with. The language of argument, problem solving and mathematical explanations is taught rather than assumed. Correspondences between language and multiple mathematical representations including mathematical and academic language are taught rather than assumed. Students should attend to and work with the languages and academic language involved in the mathematics. Materials provide examples of student explanations and arguments (e.g., fictitious student characters might be portrayed). Materials follow accepted norms of mathematical reasoning, such as distinguishing between definitions and theorems, not asking students to explain why something is true when it has been defined to be so, etc.

Emphasis on Mathematical Reasoning: Materials Support the Standards' emphasis on Mathematical Reasoning by (all of the following):

- Explaining how the full meaning of each practice standard has been attended to in the materials.
- Constructing viable arguments and critiquing the arguments of others. The materials for evaluators emphasize the Graph of the function shifts $k$ units to the right ("...") as described in the materials.

- Prompting students to construct viable arguments and critique the arguments of others.
diagrams, tables, graphs, and symbolic expressions are identified in material designed for language development. Note that variety in formats and types of representations—graphs, drawings, images, and tables in addition to text—can relieve some of the language demands that English language learners face when they have to show understanding in math. The text is considerate of English language learners, helping them to access challenging mathematics and helping them to develop grade level language. For example, materials might include annotations to help with comprehension of words, sentences and paragraphs, and give examples of the use of words in other situations. Modifications to language do not sacrifice the mathematics, nor do they put off necessary language development.

A criterion for the mathematics and statistics in materials for science and technical subjects is that English language learners face when they have to show understanding in math. The text is considerate of English language learners, helping them to access challenging mathematics and helping them to develop grade level language. For example, materials might include annotations to help with comprehension of words, sentences and paragraphs, and give examples of the use of words in other situations. Modifications to language do not sacrifice the mathematics, nor do they put off necessary language development.

The following table shows how high school science and technical subjects are consistent with CCSSM:

### Table 2: Consistency with CCSSM: Materials for Science and Technical Subjects

<table>
<thead>
<tr>
<th>Algebraic Competencies Integrated into Materials for High School Science and Technical Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Working with positive and negative numbers</td>
</tr>
<tr>
<td>- Using variables and writing and solving equations to</td>
</tr>
<tr>
<td>- Recognizing and using proportional relationships to</td>
</tr>
<tr>
<td>- Working with simple probability and random sampling and variability</td>
</tr>
<tr>
<td>- Working with distributions and measures of center</td>
</tr>
<tr>
<td>- Working with functions and their graphs to solve problems</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Statistical Competencies Integrated into Materials for High School Science and Technical Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Working with distributions and measures of center</td>
</tr>
<tr>
<td>- Working with simple probability and random sampling and variability</td>
</tr>
<tr>
<td>- Recognizing and using proportional relationships to solve problems</td>
</tr>
<tr>
<td>- Working with simple probability and random sampling and variability</td>
</tr>
<tr>
<td>- Working with distributions and measures of center</td>
</tr>
</tbody>
</table>

High school materials for these subjects build coherence across the curriculum and support college and career readiness by integrating key mathematics into the disciplines, particularly simple algebra in the physical sciences and technical subjects, and basic statistics in the life sciences and technical subjects.
The Standards are not written at uniform grain size, sometimes an individual content standard will require days of work, possibly spread over the entire year, while other standards could be covered in a shorter time span. The preceding criteria express important dimensions of alignment to the Standards. The following are some additional dimensions of quality that materials and tools should exhibit in order to give teachers and students the tools they need to meet the Standards: 

- Materials that devote roughly equal time to each content standard do not allow teachers and students to focus where necessary.
- There is variety in the pacing and grain size of content coverage.

Problems in the materials are worth doing:

- The underlying design of the materials distinguishes between problems and exercises. Some additional dimensions of quality that materials and tools should exhibit in order to give

The preceding criteria express important dimensions of alignment to the Standards. The following are indicators of quality in instructional materials and tools for mathematics:

- Problems or exercises have a purpose—whether to teach new knowledge, bring misconnections to the surface, build skill or fluency, engage the student in one or several mathematical practices, or simply present the student with a fun puzzle
- Each problem or exercise has a purpose—whether to teach new knowledge, bring misconnections to the surface, build skill or fluency, engage the student in one or several mathematical practices, or simply present the student with a fun puzzle
- Assignments aren't haphazardly designed. Exercises are given to students in intentional sequences
- The language in which problems are posed is carefully considered. Note that mathematical problems posed using only ordinary language are a special genre of text that has conventions. The language used to pose mathematical problems should evolve with the grade level and across mathematics content.
- Students need to be able to learn the language needed to pose mathematical problems and understand the structure needed to be learned. The language used to pose mathematical problems and their structures need to be learned. The language used to pose mathematical problems should evolve with the grade level and across mathematics content.
There is variety in what students produce: Students are asked to produce answers and solutions, but also, in a course-appropriate way, arguments, explanations, diagrams, mathematical models, etc. In a way appropriate to the grade level, students are asked to answer questions or develop explanations about why a solution makes sense, how quantities are represented in expressions, and how elements of symbolic, diagrammatic, tabular, graphical and/or verbal representations correspond.

Lessons are thoughtfully structured and support the teacher in leading the class through the learning paths at hand, with active participation by all students in their own learning and in the learning of their classmates. Teachers are supported in extending student explanations and modeling explanations of new methods. Lessons are supported in examining and explaining student explanations and learning paths of each student in their own learning and in the learning of their classmates. With active participation by all students, teacher-led lessons provide a structured and supported learning environment for all students.

There are separate teacher materials that support and reward teacher study, including:

- Discussion of the mathematics of the unit and the mathematical objects they represent.
- Discussion of student ways of thinking with respect to important mathematical problems and concepts—especially anticipating different representations of all of the important mathematics. For example, geometric ideas can be helpful in representing some features of geometry, but they do not provide a particularly well suited as models for polynomials having non-integer coefficients.
- Discussion of desired mathematical behaviors being elicited among the students.
- Guidance on interaction with students, mostly questions to prompt ways of thinking.
- Guidance on lesson flow.
- Discussion of student ways of thinking with respect to important mathematical problems and concepts of the unit.
- Discussion of the mathematics of the unit and the mathematical objects that support and reward teacher study, including:

The use of manipulatives follows best practices (see, e.g., Adding It Up, 2001):

- Manipulatives are connected to written methods. For example, algebra tiles are a reasonable model of certain features of algebra, but not a reasonable method for doing algebra. And/or graphic display can be helpful in representing some features of geometry, but they do not provide a particularly well suited as models for polynomials having non-integer coefficients.
- Manipulatives are connected to written methods. For example, algebra tiles are a reasonable model of certain features of algebra, but not a reasonable method for doing algebra. Procedural skill and fluency refers a written or mental method, not a method using models of certain features of algebra, but not a reasonable method for doing algebra.
- Manipulatives are carefully reviewed by qualified individuals, whose names are listed, in an effort to ensure:

- Freedom from mathematical errors.
- Materials are carefully reviewed by qualified individuals, whose names are listed, in an effort to ensure:

- None.
Age-appropriateness

- Freedom from bias (for example, problem contexts that use culture-specific background knowledge do not assume readers from all cultures have that knowledge; simple explanations)
- Freedom from unnecessary language complexity
- Support for English language learners is thoughtful and helps those learners to meet the same standards as all other students. Allowing English language learners to collaborate as they strive to learn and show understanding in an environment where English is used as the medium of instruction will give them the support they need to meet their academic goals. Materials can structure interactions in pairs, in small groups, and in larger groups (or in any other group configuration), as some English language learners might be shy to share orally with the larger group, but might not have problem sharing orally with a small group or in pairs. In addition, when working in pairs, if ELLs are paired up with a student who shares the same language, they might choose to think about and discuss the problems in their first language, and then worry about doing it in English.

The visual design isn’t distracting or chaotic, or aimed at adult purchasers, but instead serves only age-appropriateness.
lasting achievements in K–8

Essay by Jason Zimba, July 6, 2011

Most of the K–8 content standards trace explicit steps A → B → C in a progression. This can sometimes make it appear that skills at earlier grade levels are not important once students reach higher levels in the grades. However, the evidence concerning college and career readiness shows clearly that the skills students need for college, work, and life are not limited to the grade levels in which they appear. This is especially true for the high school grades that remain important far beyond the particular graduation year. (p. 84)

Other lasting achievements from K–8 would include working with proportional relationships and unit rates (e.g., solving real-world and mathematical problems posed with positive and negative rational numbers in any form—whole numbers, fractions, and decimals), applying properties of operations to calculate with numbers in any form (whole numbers, fractions, and decimals), and using tools strategically to solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals). These skills are crucial tools for college, work, and life. They are not meant to gather dust during high school, but are meant to be applied in college and the workforce.

7.EE.3

One example of a standard that refers to skills that remain important well beyond middle school is 7.EE.3: "Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies."

For example: If a woman making $25 an hour gets a 10% raise, she will make an additional $2.50 an hour, or $2.50, for a new salary of $27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge. This estimate can be used as a check on the exact computation.

Appendix

http://commoncoretools.me/2011/06/15/essay-by-jason-zimba-on-pinnacle-standards/
standards as well as the demands of the high school standards and readiness for careers and a wide range of college majors.

As shown in the figure, standards like 7.EE.3 are best thought of as descriptions of component skills that will be applied flexibly during high school in tandem with others in the course of modeling tasks and other substantial applications. This aligns with the demands of postsecondary education for careers and employers alike. Applying securely held mathematics to open-ended problems and applications is a higher-order skill valued by colleges and for a wide range of college majors. Thus, when high school students work with these skills in high school, they are not working below grade level; nor are they relearning. Applying securely held mathematics to open-ended problems and applications is a higher-order skill valued by colleges and employers alike.
INTRODUCTION

Developed by two of the lead authors of the Common Core State Standards and revised through extensive conversations with teachers, researchers and other stakeholders, these criteria are designed to guide publishers and curriculum developers as they work to strengthen existing programs and develop public schools’ literacy and arts programs. They are intended to help ensure that publishers and curriculum developers provide a clear and consistent framework.

The criteria articulated below concentrate on the most significant elements of the Common Core State Standards for literacy in kindergarten through second grade. While the goal in kindergarten through the second grade, the most notable shifts in the standards when compared to state standards include explicit preparation to read informational text and a new focus on preparing students for college and career. These criteria are developed in collaboration with state education leaders, the National Governors Association Center for Best Practices and the Council of Chief State School Officers and are being aligned to materials with the standards to provide a clear and consistent framework. The criteria are intended to help ensure that publishers and curriculum developers provide a clear and consistent framework.

In English Language Arts and Literacy, Grades K–2

Revised Publishers’ Criteria for the Common Core State Standards

David Coleman • Susan Pimentel
and a requirement that students encounter sufficiently complex text through listening even while they are learning how to read and write. The standards provide a coherent approach to reading comprehension in the early years built on anchor standards that extend into third through twelfth grade learning. Finally, the standards cultivate a wide range of writing including narrative, expression of experiences real and imagined as well as sharing information and opinions. The standards also promote the development of higher-quality, fully integrated materials that provide linear, cumulative skill progressions and practice with text-dependent questions and tasks, leading to fluency.

This document has three parts: The first articulates criteria that should guide the teaching of reading foundations; the second details the criteria that should guide the selection of texts for read-alouds and for students who already can read, and the third outlines criteria for the development of high-quality, fully integrated materials that provide linear, cumulative skill progressions and practice with text-dependent questions and tasks, leading to fluent, independent reading for meaning.
formation as well as letter naming and alphabetic order.

Details about what explicitly should be taught is outlined in the Foundational Reading Standards and further explicated in Appendix A.

1. Key Criteria for Reading Foundations

I. ELA and literacy curricula, Grades K-2

II. Materials allow for flexibility in meeting the needs of a wide range of students.

III. Materials should provide ample opportunities for students to understand and learn by practicing distributed practice.)

IV. These standards should be included in the standards for developing proficient readers with the capacity to comprehend texts and systematic instruction and diagnostic support in concepts of print, phonics, vocabulary development, syntax, and fluency. These foundational skills are necessary and central components of effective, comprehensive reading instruction programs designed to develop proficient readers with the capacity to comprehend texts.
teach explicitly all of the high-frequency words required. Materials should make it possible for students, including some English language learners, to develop knowledge of these words. Since teachers will often not have the time to teach all high-frequency words, materials should make it possible for developing knowledge of high-frequency words that are essential to reading grade-level texts. Supplemental resources will be necessary for supporting students who are mastering the meaning of high-frequency words that are essential to reading grade-level texts. Some students, including some English language learners, will also need support in word play to enhance instruction and develop a sense of word completion. Materials should focus on academic vocabulary prevalent in complex texts throughout reading, writing, listening, and speaking instruction. When they enter school, students differ widely in their vocabulary knowledge. The entire curriculum should address this function of automaticity in basic skills in speech sound, letter, and word patterns to words not previously seen or studied. Because students differ widely in how much exposure and practice they need to master foundational skills, materials also need to incorporate higher-order activities for those students who are able to reach facility with words that are being read. These activities might include routines and guidance that will enable teachers to monitor the students’ development of the meaning of the words that are being read. Teacher support for fluency instruction should explicitly recognize that reading rates vary and goals for progress toward a specific fluency goal.

**Fluency is a particular focus of instructional materials.** Fluency in the early grades is a performance and especially more important in reading. Teacher support for fluency instruction should explicitly recognize that reading rates vary and goals for progress toward a specific fluency goal.

3. Teachers should use appropriate levels of difficulty in reading materials to support students who need less practice, those students who need less practice can develop routines such as extension assignments and especially more important in reading. Teacher support for fluency instruction should explicitly recognize that reading rates vary and goals for progress toward a specific fluency goal.

4. Materials focus on academic vocabulary prevalent in complex texts throughout reading, writing, listening, and speaking instruction. When they enter school, students differ widely in their vocabulary knowledge. The entire curriculum should address this function of automaticity in basic skills in speech sound, letter, and word patterns to words not previously seen or studied. Because students differ widely in how much exposure and practice they need to master foundational skills, materials also need to incorporate higher-order activities for those students who are able to reach facility with words that are being read. These activities might include routines and guidance that will enable teachers to monitor the students’ development of the meaning of the words that are being read. Teacher support for fluency instruction should explicitly recognize that reading rates vary and goals for progress toward a specific fluency goal.
criteria recognize the critical role that teachers play in text selection. The measures are based on the principles laid out in Appendix A and have been further developed and refined. These working group has developed clear, common standards for measuring text complexity that are consistent across different curricula and grade-level text. Far too often, students who have fallen behind are given only less grade-level text. All students (including those who are behind) have extensive opportunities to encounter complex material than they can read themselves, read-aloud selections should be provided to encourage students to encounter more complex texts to build knowledge through read-alouds.

II. Key Criteria for Text Selections

1. Texts for each grade align with the requirements outlined in the standards. The Common Core State Standards provides further information on how text level to develop the multiple language skills and the conceptual knowledge they need for each grade. Core ideas expand the notion of text complexity to include rich on-student text, encouraging appropriate texts at each grade level to develop the multiple language skills and the conceptual knowledge they need for each grade.

2. All students (including those who are behind) have extensive opportunities to encounter meaningful information or narrative content with which to develop reading facility. That said, students should be guided into thoughtful reading of even complex texts.

Materials offer assessment opportunities that measure progress in the foundation of...
These materials should ensure that all students have daily opportunities to read. Additional materials aim to increase the regular independent reading of texts that illustrate the quality and complexity of student reading in the standards.)

5.

Text selection, see Appendix B of the Common Core Standards. This principle applies equally to reading in all subjects, including science and social studies. The standards call for an equal balance of literary and informational text in the curriculum, and the proportion of each should increase as students move through grades.

4. Literacy programs shift the balance of texts and instructional time to include equal measures of literary and informational text. The standards call for elementary curriculum materials to be recalibrated to reflect a mix of 50 percent literary and 50 percent informational text, including reading in ELA, science, social studies, and the arts. Achieving this balance requires an increase in instruction for slower readers that is most effective when it addresses all of the critical reading components in an integrated and coordinated manner. Students who need additional assistance, however, must not miss out on essential instruction that addresses the surface science and social studies.

3. Text selection are worth reading and re-reading. The standards maintain that high-quality, complex texts are more effective at supporting the instruction they need in the foundational skills in reading as well as vocabulary and other supports they need to read an appropriate level of complex texts rather than the instruction they need in the foundational skills in reading as simple. The standards encourage the use of simplified text to provide support for slower readers, but even these students will benefit from exposure to more complex text.

2. Reading, these materials should ensure that all students have daily opportunities to read. Additional materials aim to increase the regular independent reading of texts that illustrate the quality and complexity of student reading in the standards.

1. Instruction for slower readers is most effective when it addresses all of the critical reading components in an integrated and coordinated manner. Students who need additional assistance, however, must not miss out on essential instruction when it addresses the surface science and social studies.

These should be levels of complexity well above what students can read on their own. The principle of level readability and instructional text in the next foundation of the standards is that reading is a process of coherently within and across grades. If students do not read and write effectively, they are unlikely to develop an understanding of texts that require knowledge of both words and the world.
In an exploration of the text or texts at hand, develop a focus of individually crafted questions that draw students and teachers into the text or texts at hand. In response to the demands of that text, good questions not only engage students to attend to the text, such as “What is the main idea? Provide three supporting details.” High-quality text-dependent questions are more often text-specific rather than generic.

III. Key Criteria for Questions and Tasks

Literature

1. Questions and tasks cultivate students’ abilities to ask and answer questions based on the text.

2. Materials that accompany texts should ask students to think about what they have read or heard and then ask them to draw evidence from the text in support of their ideas (including evidence from the text itself). Questions and tasks should require thinking about the text itself.

3. Materials offered in support of reading comprehension should assist teachers and students in understanding the primary roles of instruction in these early years: developing proficiency and fluency; developing reading, writing, speaking, and listening skills; and providing opportunities for students to practice these skills independently and with others.

4. Materials should be designed to support the development of proficient readers who are able to learn independently from a wide variety of rich texts.

5. The aim is for students to understand that thinking and reading occur simultaneously. Curricula should focus on fostering accuracy, fluency, and comprehension, as well as the development of higher-order thinking skills. Materials should be designed to support these goals, including the development of a strong foundation in reading, writing, and thinking.

6. Texts should also vary in complexity levels that will challenge and motivate students, requiring them to slow down or read more quickly depending on their purpose for reading.

7. Texts that students become interested in the text and cultivate a sense of ownership of the specific materials should not rely on “cookie-cutter” questions that could be asked of any text. Instead, materials should focus on pairing specific questions with specific texts. Questions should draw students and teachers into the text, such as “What is the main idea? Provide three supporting details.”

8. Materials should focus on posing questions and tasks that help students become interested in the text and cultivate a sense of ownership of the specific text. Instructional support materials should focus on building student confidence and fluency in reading, writing, and thinking about the text itself. The standards strongly focus on students gathering evidence and then drawing evidence from the text in support of their ideas.

These goals, and text-dependent questions and tasks, extend the work of students and teachers into the classroom, focusing on the primary roles of instruction in these early years: developing proficiency and fluency, developing reading, writing, speaking, and listening skills, and providing opportunities for students to practice these skills independently and with others. Materials should be designed to support the development of proficient readers who are able to learn independently from a wide variety of rich texts.
4. Reading strategies support comprehension of specific texts and the focus on building knowledge.

Contrasts or into vocabulary of other problems.

Students need for students to read of lessons in the lessons complex.

This approach can and should design opportunities for careful reading of specific texts (including read-alouds). Materials should design opportunities for careful reading of specific texts.

Students’ initial exposure to a text should often challenge their knowledge.

When necessary, extra textual scaffolding prior to and during the first read focus.

Materials provide opportunities for students to build knowledge through close reading.

Texts and the curriculum should explicitly direct students to re-read challenging portions of the text when and where they might struggle, applying scaffolding the application of decoding strategies, and prompting students back to the text with teacher support when they are confused or run into vocabulary or other problems.

After reading, students should be asked to glean the information they have learned before? Drawing upon relevant prior knowledge, how does what they have just read compare to what they have read and learned previously? How does what they felt after reading/retelling the text compare to what they felt before reading/retelling the text?

Teachers should be encouraged to develop their own settled knowledge, rather than an end unto themselves and assist students in building knowledge from the heart of classroom activities and not be consigned to the margins when completing close reading and gathering knowledge from specific texts.

Reading strategies support comprehension of specific texts and the focus on building knowledge.

Close reading and gathering knowledge from specific texts should be at the heart of classroom activities and not be consigned to the margins when completing classroom activities and not be consigned to the margins when completing close reading and gathering knowledge from specific texts.
with the whole range of Common Core State Standards. That already have a clear and documented research and practice base.

**Conclusions: Transparent Research and Practice Base**

Curriculum materials must also have a clear and documented research base. Curriculum offered as an excellent match for the Common Core State Standards should produce evidence of its usability and efficacy with a full range of students. Including English Language Learners. In all materials.

Over time, and through supportive discussion, interaction, and reflection, students need to build the reading and writing skills and tools along with sequence structure, spelling and the like. Developing these basic skills and tools along with standard reading requirements in early grades to know their letters, phonetic conventions, and basic decoding skills. As students encounter through reading of real-world texts to make meaning from the selections, the means of self-expression and expression. Writing assignments should be varied and ask students to focus their experience, imagination, and most frequently on the texts they encounter through reading or read-alouds. As a means of supporting by including tasks that require students to demonstrate their knowledge and understanding through selected writing. A good writing tool is a measure of communicative thinking and meaningful expression and a good writing tool is a measure of communicative thinking and meaningful expression.

6. **Materials offer assessment opportunities that genuinely measure progress.** While important, assessments, including systems for record-keeping and reporting, should not be the central and surrounding materials should be included in the reading process. The text should be central and surrounding materials should be included. Surrounding materials should be thoughtfully considered and integrated as essential before supplementary texts. The text should be the primary focus of student and teacher attention. Appropriate reading instruction is needed to build in meaningful progress. Students should access the teacher's guidance of the students. Extensions of curriculum materials should be aligned centrally located within materials. The reading passages.

7. **Writing opportunities for students are prominent and varied.** The standards call for writing both in English and in any other language. Writing as a means of communicating ideas and answering questions and as a means of self-expression and exploration. Writing assignments should be varied and ask students to focus on the texts they encounter through reading or read-alouds. As a means of supporting by including tasks that require students to demonstrate their knowledge and understanding through selected writing. A good writing tool is a measure of communicative thinking and meaningful expression.
INTRODUCTION

Developed by two of the lead authors of the Common Core State Standards and revised through conversations with teachers, researchers, and other stakeholders, these criteria are designed to guide publishers and curriculum developers as they work to ensure alignment with the standards in English language arts (ELA) and literacy for history/social studies, science, and technical subjects. The standards are the product of a state-led effort—coordinated by the National Governors Association Center for Best Practices and the Council of Chief State School Officers—in English language arts (ELA) and literacy for history/social studies, science, and technical subjects.

The criteria make plain that developing standards, progress in reading and history, and success is clear. The standard focuses on two primary goals:

1. Comprehension of text and acquisition of knowledge, where the interdependence of understanding

2. Write and speak about them.

These criteria shape the focus on the close connection between

Knowledge and evidence from the text, hence evidence and possible refinements. Student knowledge and evidence mean gaining the maximum insight or knowledge possible from each source. Student knowledge is drawn from the text is demonstrated when the text is clearly related to the text.

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This document has two parts: The first articulates criteria for ELA materials in Grades 3–12 and the second for history/social studies, science, and technical materials in Grades 6–12. Each part contains sections discussing the following key criteria:

I. Key Criteria for Writing to Sources and Research
II. Key Criteria for Academic Vocabulary
III. Key Criteria for Questions and Tasks
IV. Key Criteria for Text Selection

V. Additional Key Criteria for Student Reading, Writing, Listening, and Speaking

The criteria for ELA materials in Grades 3–12 have one additional section:
Some percentage of students will enter Grade 3 or later grades without a command of foundational reading skills such as decoding. It is essential for these students to have developed and refined skills in phonetic awareness and beginning knowledge of both words and the world.

Some students, particularly those involved in thoughtful discussion, need extra assistance with fluency practice and vocabulary building. These students may need extra support before they can read and understand complex reading material and comprehend complex text. These students may require specific instruction and guidance on how to access, analyze, and interpret complex text. Teachers must create an environment where all students are engaged and prepared to learn at their own pace.

Text Complexity:

1. Key Criteria for Text Selection

   a. Texts for each grade align with the complexity requirements outlined in the Common Core State Standards. Reading Standard 10 outlines the level of text complexity at which students need to demonstrate comprehension in each grade. Appendix A in the standards provides guidance on how to measure and assess the text complexity of various texts.

   b. All students (including those who are English Learners) have extensive opportunities to engage in Grade-Level Complex Text.

   c. Texts for each grade align with the complexity requirements outlined in the Common Core State Standards. Reading Standard 10 outlines the level of text complexity at which students need to demonstrate comprehension in each grade. Appendix A in the standards provides guidance on how to measure and assess the text complexity of various texts.

   d. The Common Core State Standards require students to read increasingly complex texts at every grade level. Students should be prepared with opportunities to read texts that exceed their current grade level to demonstrate growth in reading comprehension and critical thinking skills.

   e. ELA and Literacy Curricula, Grades 3–5; ELA Curricula, Grades 6–12
Range and Quality of Texts: The Common Core State Standards require a greater focus on informational texts and literary nonfiction in ELA classes in Grades 6–
The Common Core State Standards provide several examples of high-quality literacy.

**C. nonfiction**

The Common Core State Standards provide several examples of high-quality literacy.

**B. In grades 6-12**

The Common Core State Standards emphasize a significant shift in instructional time towards reading substantial more literary nonfiction. The standards require students to read a broad range of high-quality literary nonfiction, including a balanced selection of literature, drama, and poetry. The standards also emphasize a significant shift in instructional time towards reading substantial amounts of literary nonfiction.

**A. In grades 3-5**

The standards include equal measures of literary and informational texts.

By reading in history/social studies, science, and the arts, students should build a coherent body of knowledge and common understanding of the human body, providing an understanding of the body’s structure and function. This knowledge should include texts that develop understanding of the body’s systems, the dependence on other systems, and the impact of technology on health. Students should build a coherent body of knowledge and common understanding of the human body, providing an understanding of the body’s structure and function. This knowledge should include texts that develop understanding of the body’s systems, the dependence on other systems, and the impact of technology on health.
II. Key Criteria for Questions and Tasks

A. A significant percentage of tasks and questions are text-dependent. Among the highest priorities of the Common Core State Standards is that students be able to read closely and gain knowledge from texts.

B. High-quality text-dependent questions move students to deliberate study of a text and able to make valid claims that rest squarely on the evidence in the text. They are text-specific questions, particularly those that ask students to state their knowledge and insight about the text within the context of the details of what is explicitly stated but also how the text is structured.

C. High-quality text-dependent questions ask students to demonstrate that they not only can follow the details of what is explicitly stated but also how the text is structured. They are text-specific questions that ask students to state their knowledge and insight about the text within the context of the details of what is explicitly stated.

D. Specific texts or text passages noted in the standards are included. At specific points, from the text itself, these should be grouped together to support responses.

1. Text-dependent questions do not require information or evidence from outside the text or texts; they establish what follows and what does not follow from the text itself.

2. Within a sequence of collection of texts, specific anchor texts are selected for especially careful reading, often in response to a major focus of the standards.

3. Career ready.

American literature of classic myths and stories as part of becoming college and career ready. It is essential that such materials include a selected text or texts to explore a topic. It is essential that such materials include a selected text or texts to explore a topic.

E. Within a sequence of collection of texts, specific anchor texts are selected for especially careful reading, often in response to a major focus of the standards.

F. A significant percentage of tasks and questions are text-dependent. Among the highest priorities of the Common Core State Standards is that students be able to read closely and gain knowledge from texts.
The sequence of questions should not be

can be used to make progress in reading as well as the

command of evidence in texts is essential to making progress in reading as well as the

Example: A sequence of questions that could be asked of any text, such as “What is the main idea?”,

and students to have at hand, materials should not rely on “cookie-cutter”

A text-dependent approach can and should be applied to building knowledge from

B. High-quality sequences of text-dependent questions elicit sustained attention to the

Gathering text evidence is equally crucial when reading with large volumes of text for

Question: What evidence can you provide to support the claim that the text is

A text-dependent approach can and should be applied to building knowledge from

A text-dependent approach can and should be applied to building knowledge from

A text-dependent approach can and should be applied to building knowledge from

Questions that draw students and teachers into an exploration of the text or topics at

Additionally, simple questions requiring attention to specific words, details, and

question: What evidence can you provide to support the claim that the text is

A text-dependent approach can and should be applied to building knowledge from

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A text-dependent approach can and should be applied to building knowledge from

A text-dependent approach can and should be applied to building knowledge from

translating its contents for students or telling students what they are going to learn in State Standards. However, the scaffolding should not preempt or replace the text by placing it in a separate document. Many students will need careful instruction — including explicit scaffolding — to enable them to read at the level of text complexity required by the Common Core. Scaffolds enable all students to experience rather than avoid the complexity of the text.

F. Questions and tasks attend to analyzing the arguments and information at the heart of specific texts.

Activity should not supplant the close examination of each specific text. Questions should not arise out of specific texts, students can and should make connections between texts, but this should not occur out of specific texts. Scaffolding across texts and ideas should build back to careful reading of specific texts. Students should be able to use their knowledge of a subject to construct more coherent and complex arguments. The English teacher should ask questions that pull students away from an in-depth encounter with the specific text or texts; rather, questions should be taken that initial questions are not so overly broad and general that they random but should build toward more coherent understanding and analysis. Careful attention to those readings allows students to gather evidence and build connections amongst texts and ideas.

E. Materials provide opportunities for students to build knowledge through close reading.

Just as texts should be worth reading, so should questions be worth answering. Understanding the best questions will motivate students to think in and explore further. These questions will return students to the text to achieve greater understanding and build their knowledge. This approach can and should encourage the comparison and synthesis of multiple sources. Once each source is read and understood carefully, attention should be directed to those readings that show students to gather evidence and build connections amongst texts and ideas.

D. Curriculum materials should design opportunities for close reading of specific texts.

Materials should design opportunities for close reading of specific texts. This can be done through selected passages or texts and create a series of questions that provoke a deeper understanding of the text.

C. Another key priority of the Common Core State Standards is a requirement that students be able to demonstrate

The shift in emphasis on narrative text or the narrative aspects of literary nonfiction (the characters and the story) toward more in-depth engagement with the informational aspects of these texts, is a requirement that students be able to demonstrate.

B. Scaffolds enable all students to experience rather than avoid the complexity of the text.

Many students will need careful instruction — including explicit scaffolding — to enable them to read at the level of text complexity required by the English teacher.

A. Cultivating Students’ Ability to Read Complex Texts Independently:

The common core state standards is a requirement that students be able to demonstrate care in their independent capacity to read at the appropriate level of complexity and depth.

The common core state standards is a requirement that teachers and students to follow the details of an argument and reasoning in literary and argumentative aspects of these texts.

While the English teacher is not meant to be a content expert in an area covered by particular curricular materials, teachers and students should be required to follow and comprehend the scientific developed in the text.

For example, in a narrative with a great deal of science, teachers and students should be expected to demonstrate careful understanding of the information learned before. Drawing upon relevant prior knowledge, how does what they have just read compare to what they have read and learned previously? Drawing upon relevant prior knowledge, how does what they have just read compare to what they have read and learned previously? How does what they have just read compare to what they have read and learned previously? How does what they have just read compare to what they have read and learned previously? How does what they have just read compare to what they have read and learned previously? How does what they have just read compare to what they have read and learned previously? How does what they have just read compare to what they have read and learned previously? How does what they have just read compare to what they have read and learned previously? 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writing to clarify, examine, and organize their own thinking, so reading materials may either promote or detract from a student’s ability to engage their reading and their students. The specific ideas and details, drawn from the text, and Building upon the general conversations already ongoing, the teacher can build upon previous knowledge and experiences that enable the student to approach new challenges with confidence and skill. Teachers need to build an instructional context, their knowledge and disposition.

C.

Building Knowledge and Engagement

Specific reading activities should occur when they align specific aspects of a text with the text.

Boostrap onto each other and promote deep thinking and substantive engagement.

When productive struggle with the text is enhanced, the complex text before the reader and other students who are especially familiar by the complex text before the teacher and other students who are especially familiar with the text and other students, including English learners, are not likely to know or be able to determine from context-

Supports should focus on words and concepts that are essential to basic understanding and that advance the reader’s ability to comprehend the text on its own terms, with instructions providing helpful directions.

Materials designed to serve a wide range of readers, including English language learners, should focus on words and concepts that are essential to basic understanding and that advance the reader’s ability to comprehend the text on its own terms, with instructions providing helpful directions. When necessary, extra textual scaffolding prior to and during the first read should carefully align scaffolding with the standards and result in the reader carefully aligning specific portions of the text to later in the text.

The text or the organization of ideas in the paragraph can help focus the student’s attention on key phrases and statements. When a text is confusing and not clear, the text and other students who are especially familiar with the text and other students, including English learners, are not likely to know or be able to determine from context.

Follow-up support should guide the reader when encountering places in the text where he might struggle. All clues and strategies should be designed to serve a wide range of readers, including English language learners, should focus on words and concepts that are essential to basic understanding and that advance the reader’s ability to comprehend the text on its own terms, with instructions providing helpful directions. When necessary, extra textual scaffolding prior to and during the first read should carefully align scaffolding with the standards and result in the reader carefully aligning specific portions of the text to later in the text.
Materials focus on academic vocabulary prevalent in complex texts throughout reading.

III. Key Criteria for Academic Vocabulary

Follow-up and easily implemented assessments, including systems for record keeping and completion, should provide effective ongoing prompts for students to analyze texts in writing.

Materials offer assessment opportunities that genuinely measure progress.

Materials make the text the focus of instruction by avoiding features that distract from the text.

Questions and tasks require careful comprehension of the text before asking for further evaluation or interpretation.

Further Education on Interpretation. The Common Core State Standards call for students to demonstrate a careful understanding of what they read before engaging in critical thinking. Therefore, materials should be designed to address students’ prior knowledge and skills.

The Common Core State Standards for reading and writing require that students engage in critical thinking, which involves the analysis of information and the synthesis of ideas and evidence. These standards emphasize the importance of academic vocabulary and the need for materials that promote the development of critical thinking skills.

Academic vocabulary (described in more detail in Appendix A of the Common Core State Standards) includes those words that readers will find in all types of complex texts from different disciplines. These words are often used in writing and speaking and are essential for reading and understanding complex texts.

E. Questions of interpretation before cultivating command of the details and specific ideas in the text.

The level text should be chosen to check the quality and accuracy of students’ evaluation and interpretation. The text should be engaging enough to motivate students to read it. The text should provide opportunities for students to work independently on analyzing text.

The Common Core State Standards for reading and writing require that students engage in critical thinking, which involves the analysis of information and the synthesis of ideas and evidence. These standards emphasize the importance of academic vocabulary and the need for materials that promote the development of critical thinking skills.

Materials should be designed to address students’ prior knowledge and skills. This includes providing opportunities for students to work independently on analyzing text.

The Common Core State Standards call for students to demonstrate a careful understanding of what they read before engaging in critical thinking. Therefore, materials should be designed to address students’ prior knowledge and skills.

Instructional materials should be designed to engage students in critical thinking and promote the development of academic vocabulary. These materials should provide opportunities for students to work independently on analyzing text.
In elementary school, 30 percent of student writing should be to explain/inform, and 35 percent should be narrative. The Common Core State Standards require that the balance of writing students are asked to do parallel the balance assessed in response to decontextualized prompts that ask students to draw evidence from a text or texts to support analysis, reflection, or research. As a consequence, less classroom time should be spent on personal writing in response to decontextualized prompts.

Materials portray writing to sources as a key task. While narrative writing is given prominence in early grades, as students progress through the grades the balance of writing is given prominence in early grades, and less classroom time should be spent on personal writing in response to decontextualized prompts.

Materials focus on forming arguments as well as informative writing. Materials should help students acquire knowledge of general academic vocabulary because those words are unique to a discipline. Materials should also provide guidance to teachers.

Providing such things as student-friendly definitions for high-frequency words whose meanings cannot be inferred from the context alone can be useful for English language learners. Some students, including some English language learners, will also need support in mastering high-frequency words that are not Tier 2 but are essential to reading results will be a factor when students are not able to infer other meanings from the text alone. As the meanings of words vary within a text, more evidence is needed to reach the meanings of a word in the context provided to reach the meaning of a word, the more frequent the word.

Materials should guide students to gather as much as they can about the meaning of these words and pay attention only to the technical words.

Materials should provide summaries of key concepts and support for vocabulary when students are not likely to figure out their meanings from the context. Sometimes curricula ignore these words and pay attention only to the technical words.
Materials help teachers plan substantive academic discussions.

2. Materials provide systematic opportunities for students to read complex text with fluency.

In accordance with the Common Core State Standards, materials should provide systematic opportunities for students to read complex text with fluency. Fluency describes the pace and accuracy with which students read — the extent to which students adjust the pace, stress, and tone of their reading to respond to the text.

Materials should highlight strengthening preparation, evidence, and research — real, substantive discussions that require students to respond directly to the ideas of their peers. Materials should highlight strengthening preparation, evidence, and research — real, substantive discussions that require students to respond directly to the ideas of their peers. Listening prompts and questions should offer opportunities for students to share topics and texts and the experts’ ideas for responding to the ideas of their peers. Listening prompts and questions should offer opportunities for students to share topics and texts and the experts’ ideas for responding to the ideas of their peers.

Materials should help teachers plan substantive academic discussions. In accordance with the Common Core State Standards, materials should help teachers plan substantive academic discussions.

Students are given extensive practice with short, focused research projects, Writing.

4. Students are given extensive practice with short, focused research projects.

Good writing includes drawing significant and relevant evidence from texts. students write coherently with good structure, style, and content. Student writing should use the guidance of the research projects, the writing standards, and the expertise of the teachers. Student writing should involve using evidence drawn from texts.

The research should involve using evidence drawn from texts. student writing should make it clear that student writing should be responsive to the needs of the audience and the particularity of the text in question. The research should involve using evidence drawn from texts. The research should involve using evidence drawn from texts.

In high school, 20 percent of student writing should be to write arguments; 40 percent percent of student writing should be to explain/inform; and 30 percent should be narrative.

In middle school, 35 percent of student writing should be to explain/inform, and 20 percent should be narrative.

• Use evidence as directly relevant.
• Use evidence as not strictly independent; for example, explanations often include narrative elements, and both informing and argumentative essays should be to explain/inform, and 20 percent should be narrative.
actual use and results with a wide range of students, including English language learners.

3. Materials use multimedia and technology to deepen attention to evidence and texts.

4. Materials embrace the most significant grammar and language conventions.

CONCLUSION: EFFICACY OF ALIGNED MATERIALS

Curriculum materials must have a clear and documented research base. The most important evidence is that the curriculum accelerates student progress toward career and college readiness.

It can be surprising which questions, tasks, and instructions promote the most productive engagement with text, accelerate student growth, and deepen instructor facility with the standards. A great deal of the material designed for the standards will by necessity be new, but as educators learn to apply the essential “rules” of standard written and spoken English, they may adapt materials to fit the needs of their students.

Curriculum materials must provide a focus for instruction each year to ensure that students gain language standards as they are applied in increasingly sophisticated contexts. The materials should also address when students should address formal conventions and when they are speaking and writing for a less formal purpose.

Curriculum materials must have a clear and documented research base. The most important evidence is that the curriculum accelerates student progress toward career and college readiness.

It can be surprising which questions, tasks, and instructions promote the most productive engagement with text, accelerate student growth, and deepen instructor facility with the standards. A great deal of the material designed for the standards will by necessity be new, but as much as possible the work should be based on research and developed and refined through actual testing in classrooms. Publishers should provide a clear research plan for how the efficiency of their materials is assessed and improved over time. Revisions should be based on evidence of student achievement.

The Language Standards provide a focus for instruction each year to ensure that students gain language standards as they are applied in increasingly sophisticated contexts. The materials should also address when students should address formal conventions and when they are speaking and writing for a less formal purpose.

The materials should also address when students should address formal conventions and when they are speaking and writing for a less formal purpose.

The common core State Standards require students to compare the knowledge they gain from other multimedia sources, such as video. The standards for reading literature especially require students to observe different productions of the same text to assess how each production interprets evidence from reading texts to the knowledge they gain from other multimedia sources, such as video. The common core State Standards require students to compare the knowledge they gain from other multimedia sources, such as video. The standards for reading literature especially require students to observe different productions of the same text to assess how each production interprets evidence from reading texts to the knowledge they gain from other multimedia sources, such as video. The common core State Standards require students to compare the knowledge they gain from other multimedia sources.
developed and refined. These criteria recognize the critical role that teachers play in providing students with high-quality instruction. The measures are based on the principles laid out in Appendix A, which are further developed in the Common Core State Standards. This brief addendum to the publishers' criteria for ELA in Grades 6–12 focuses on the portions of the standards that are particularly relevant to materials in history/social studies, science, and technical subjects.

Grades 6–12
Technical Subjects: Literacy Curriculum, History/Social Studies, Science, and
B. Curriculum includes opportunities to combine quantitative information derived from text and other visual forms and media with information derived from text.

C. Informational text. The Common Core State Standards require a keen focus on informational text.

2. Range and Quality of Texts: The Common Core State Standards require a keen focus on informational text.

Many curricula provide texts that are valuable sources of information.
Standards might require students to compare their own experimental results to results about which they have read, and integrate information from video or other media with what they learn from text.

II. Questions and Tasks

1. High-Quality Text-Dependent Questions and Tasks: Among the highest priorities of the Common Core State Standards is that students be able to read closely and gain knowledge from extended or longer texts and create a series of questions that demonstrate how close reading of a specific text or texts allows students to gather evidence and knowledge from the text.

   A. Curriculum provides opportunities for students to build knowledge through close reading of selected passages.

   b. All activities involving text require that students demonstrate increasing mastery of evidence-drawing text evidence is equally crucial when dealing with larger volumes of text for research or other purposes.

   specific texts. Evidencing text evidence is equally crucial when dealing with larger comprehension across texts and ideas should bring students back to careful reading of knowledge. As students apply knowledge and concepts gained through reading to your vetted and proven knowledge, how does the text expand on concepts that define where they have just read? In what ways have you learned before? Drawing from each source is read and understood carefully, attention should be given to interpretative explanations, observations, and discourses around these scientific authentic once. If these notes that are science authentic mean, non-text sources such as knowledge from the comparison and synthesis of authentic sources in science and extended or longer texts and creates a series of questions that demonstrate how close reading of a specific text or texts allows students to gather evidence and knowledge from the text.

   B. All activities involving text require that students demonstrate increasing mastery of evidence-drawing text evidence is equally crucial when dealing with larger volumes of text for research or other purposes.

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is equally crucial when dealing with larger volumes of text for research or other purposes.

C. Questions and tasks require careful comprehension of the text before asking for further evaluation and interpretation.

The Common Core State Standards call for students to demonstrate a careful understanding of what they read before engaging their opinions, appraisals, or interpretations.

Aligned materials should therefore require students to demonstrate that they have followed the details and logic of an author's argument before they are asked to evaluate the thesis or compare the thesis to others. Before students are asked to go beyond the text and apply their learning, teachers and other students who are especially familiar with the complex text before reading the text. When necessary, extra textual scaffolding prior to and during the paragraph on the work as a whole.

Statements in the text on the organization of ideas in the paragraph on the work's

A. Scaffolds enable all students to experience rather than avoid the complexity of the text.

The scaffolds enable students to demonstrate their independent capacity to read and write in every domain of the Common Core State Standards, as required by the Common Core State Standards. Another key priority is that students demonstrate their independent capacity to read complex texts and to explain their ideas and details of the text to others. Before students are asked to go beyond the text and apply their learning, teachers and other students who are especially familiar with the complex text before reading the text. When necessary, extra textual scaffolding prior to and during the first read should focus on words and concepts that are essential to basic understanding and that focus on words and concepts that are essential to basic understanding and that

B. Design for whole-group, small-group, and individual instruction.

It is essential that questions, tasks, and activities are designed to ensure that all students are actively engaged in reading. Materials should

2. Cultivating Students' Ability to Read Complex Texts Independently:

Another key priority is that students demonstrate their independent capacity to read complex texts and to explain their ideas and details of the text to others. Before students are asked to go beyond the text and apply their learning, teachers and other students who are especially familiar with the complex text before reading the text. When necessary, extra textual scaffolding prior to and during the first read should focus on words and concepts that are essential to basic understanding and that focus on words and concepts that are essential to basic understanding and that

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III. Academic (and Domain-Specific) Vocabulary

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IV. Writing to Sources and Research

1. Materials portray writing to sources as a key task. Crafting an argument frequently relies on using information; similarly, an analysis of a subject will include argumentative forms. While these forms are not strictly independent, what is critical to both forms of argumentation is the use and integration of evidence. Students should demonstrate their knowledge throughout writing by constructing and analyzing different aspects of the same topic as well as other topics.

2. Materials make it clear that student writing should be responsive to the needs of the audience and the particulars of the text in question. As the standards are silent on length and structure, student writing should not be evaluated by whether it follows a traditional format of formula (e.g., the five-paragraph essay). Instead, the Common Core State Standards have been carefully designed to focus on the elements of character, style, and point of view. Writing that is well-organized, coherent, and developed, and that includes evidence from multiple sources, is crucial. Students should be given the opportunity to analyze different aspects of the same topic as well as other texts and source materials on that topic.

3. Students are given extensive practice with short, focused research projects. Writing Standard 7 emphasizes that students should conduct several short research projects in addition to more sustained research efforts. Materials should require several of these short research projects annually to enable students to repeat the research process many times and develop the expertise needed to conduct research independently. A short research project is usually to enable students to repeat the research process many times and develop the expertise needed to conduct research independently. A short research project annually can enable students to repeat the research process many times and develop the expertise needed to conduct research independently. A short research project annually can enable students to repeat the research process many times and develop the expertise needed to conduct research independently. A short research project annually can enable students to repeat the research process many times and develop the expertise needed to conduct research independently. A short research project annually can enable students to repeat the research process many times and develop the expertise needed to conduct research independently. A short research project annually can enable students to repeat the research process many times and develop the expertise needed to conduct research independently.

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