

**Welcome Back!**

# **Assessment for Learning: Leveraging Schoolnet for Enhancing Student Performance**

## **Module 5**

Wiki: <https://tinyurl.com/IdahoCCSS>

**What are the essential components of a balanced assessment system?**



***Insert Link Here***

# Day Five Learning Targets

- I understand a balanced assessment system.
- I understand the Smarter Balanced content and item specifications.
- I understand attributes of the formative assessment process.
- I understand how to use Schoolnet for formative, interim, or summative assessments.

# Day Five Success Criteria

- I can explain a balanced assessment system.
- I can explain the Smarter Balanced content and item specifications and know where to find them.
- I can name and describe the four attributes of the formative assessment process.
- I can use Schoolnet for formative, interim, or summative assessments.

# Agenda

AM

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- Welcome, Agenda, and Goals
- Understanding a Balanced Assessment System
- Best Practices in Formative Assessment
- Digital Centers Exploration in Schoolnet

PM

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- Hands On: Item Creation in Schoolnet
- Action Planning: Balanced Assessment Plan
- Reflection, Closing, and Surveys

# Essential Question:

How can we use our knowledge of balanced assessment systems to inform instruction?

# Answer Garden

What are the essential components of a balanced assessment system

Type your answer here...

Submit



20 characters remaining

summative type of assessment  
interim quiz  
dok unit test rubric  
formative homework  
multiple

'dok' 'DOK' is answered 1 time

DOK 1-2



**What are the essential components of a balanced assessment system?**

# Balanced Assessment System

- To guide instruction and improve performance for each student, schools must use and analyze:

## MULTIPLE

- Types of assessments
- Data sources
- Occasions

# Summative Assessment

- Focused on accountability, not for instructional purposes
- Measures performance at a single point in time
- Typically given once per year
- Standardized for evaluation of school, district, and state performance
- Can also be end-of-unit tests used for grading purposes only

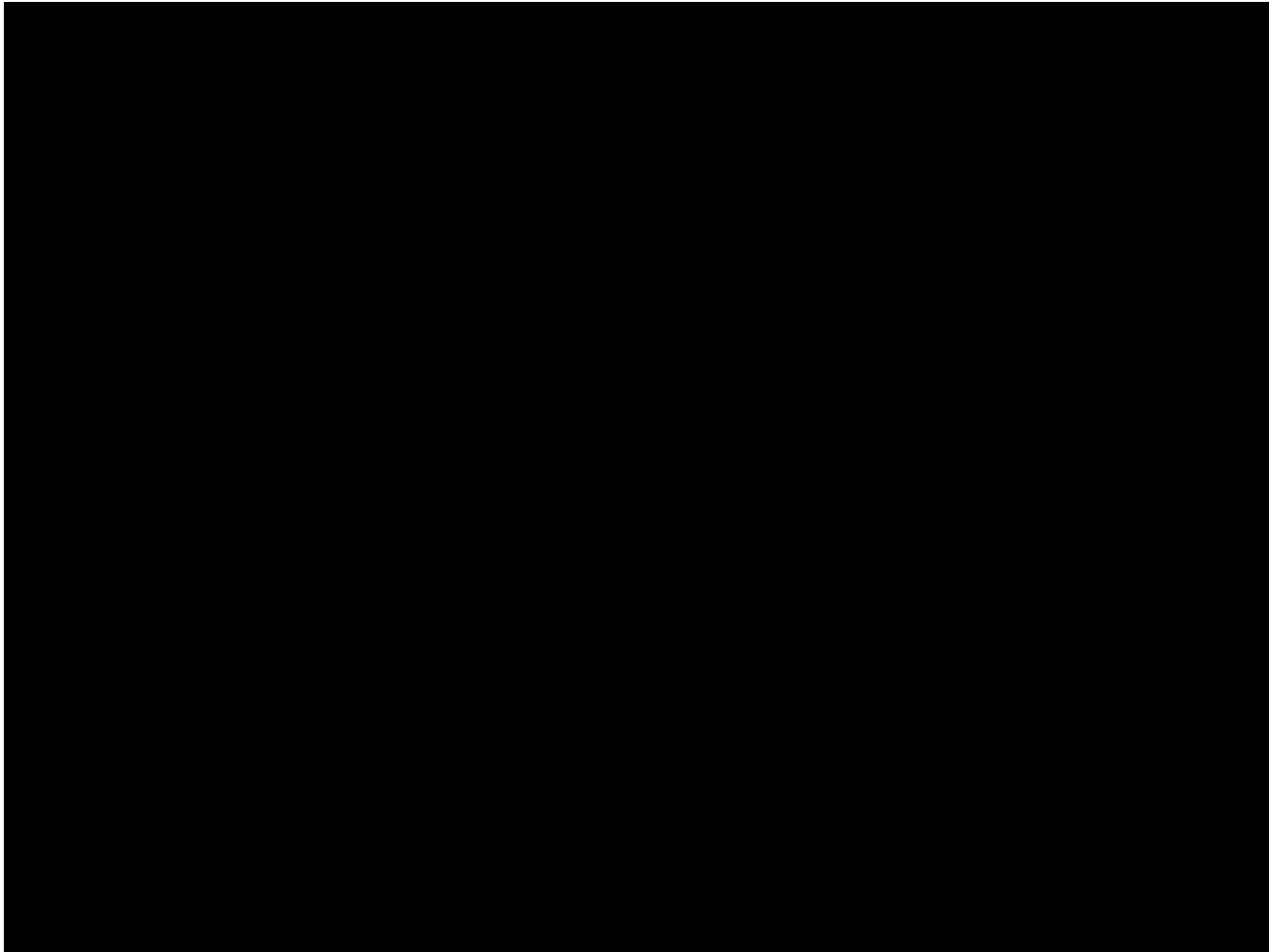
# Interim Assessment

- Used to diagnose student learning
- Monitors progress throughout the year
- Given multiple times during the school year to make instructional adjustments
- Requires psychometric analysis to measure performance and monitor progress
- Primary goal is for educators to interpret the resulting data to make instructional changes

# Formative Assessment

- Daily ongoing evaluation
- Used to inform instruction
  - Diagnose achievement gaps
  - Improve student learning
- Seamlessly embedded into learning activities

# **Overview of Webb's Depth of Knowledge: Karin Hess**



# Depth of Knowledge

**DOK 1:** Recall or identify a fact, definition, term; focus on initial comprehension

**DOK 2:** Demonstrate conceptual information through explanation, interpretation (make some decisions)

**DOK 3:** Strategic thinking, reasoning, planning, using evidence, interpreting

**DOK 4:** Extended thinking, relate concepts to other content areas, new situations...synthesize, show new perspective

**A “Snapshot” of the Cognitive Rigor Matrix (Hess, Carlock, Jones, & Walkup, 2009)**

	Depth of Thinking (Webb)			
+ Type of Thinking (Revised Bloom)	DOK Level 1 Recall & Reproduction	DOK Level 2 Basic Skills & Concepts	DOK Level 3 Strategic Thinking & Reasoning	DOK Level 4 Extended Thinking
<b>Remember</b>	-Recall conversions, terms, facts			
<b>Understand</b>	-Evaluate an expression -Locate points on a grid or number on number line -Solve a one-step problem -Represent math relationships in words, pictures, or symbols	- Specify, explain relationships -Make basic inferences or logical predictions from data/observations -Use models /diagrams to explain concepts -Make and explain estimates	-Use concepts to solve non-routine problems -Use supporting evidence to justify conjectures, generalize, or connect ideas -Explain reasoning when more than one response is possible -Explain phenomena in terms of concepts	-Relate mathematical concepts to other content areas, other domains -Develop generalizations of the results obtained and the strategies used and apply them to new problem situations
<b>Apply</b>	-Follow simple procedures -Calculate, measure, apply a rule (e.g., rounding) -Apply algorithm or formula -Solve linear equations -Make conversions	-Select a procedure and perform it -Solve routine problem applying multiple concepts or decision points -Retrieve information to solve a problem -Translate between representations	-Design investigation for a specific purpose or research question - Use reasoning, planning, and supporting evidence -Translate between problem & symbolic notation when not a direct translation	-Initiate, design, and conduct a project that specifies a problem, identifies solution paths, solves the problem, and reports results
<b>Analyze</b>	-Retrieve information from a table or graph to answer a question -Identify a pattern/trend	-Categorize data, figures -Organize, order data -Select appropriate graph and organize & display data -Interpret data from a simple graph -Extend a pattern	-Compare information within or across data sets or texts -Analyze and draw conclusions from data, citing evidence -Generalize a pattern -Interpret data from complex graph	-Analyze multiple sources of evidence or data sets
<b>Evaluate</b>			-Cite evidence and develop a logical argument -Compare/contrast solution methods -Verify reasonableness	-Apply understanding in a novel way, provide argument or justification for the new application
<b>Create</b>	- Brainstorm ideas, concepts, problems, or perspectives related to a topic or concept	-Generate conjectures or hypotheses based on observations or prior knowledge and experience	-Develop an alternative solution -Synthesize information within one data set	-Synthesize information across multiple sources or data sets -Design a model to inform and solve a practical or abstract situation



# Live to Site: Smarter Balanced

The screenshot shows the homepage of the Smarter Balanced Assessment Consortium. At the top left is the logo, which consists of three stylized triangles (green, blue, and grey) forming a larger triangle, with the text "Smarter Balanced Assessment Consortium" below it. To the right of the logo are navigation links: "Home", "Contact Us", and "Member States Login". Below these is a "Stay Connected" section with an email icon and a search bar containing the text "What are you looking for?" and a "Search" button. A horizontal navigation menu below the search bar includes links for "ABOUT", "SMARTER BALANCED ASSESSMENTS", "K-12 EDUCATION", "HIGHER EDUCATION", "PARENTS & STUDENTS", and "RESOURCES & EVENTS". The main content area features a large banner with a photograph of students at computers on the left. The text in the banner reads "Take the Practice Test" in a large, bold font, followed by "Get an early look at English language arts/literacy and mathematics assessment questions aligned to the Common Core." and a "READ MORE" link with a right-pointing arrow. To the right of the banner are two portrait photographs of a young girl and a woman. Below the banner, there is a section titled "Smarter Balanced Assessment Consortium" with a paragraph of text and a "READ MORE" link. To the right of this section is a callout box titled "SMARTER EN ESPAÑOL" with text in Spanish and a "Más" link. Below the "Smarter Balanced Assessment Consortium" section is a "Latest News" section with a sub-heading "FAQs for Usability, Accessibility, and Accommodations Guidelines Now Available" and a paragraph of text. To the right of this section is another callout box titled "School Years" with text about the implementation of assessments in the 2014-15 school year.

**Smarter Balanced Assessment Consortium**

Smarter Balanced is a state-led consortium developing assessments aligned to the Common Core State Standards in English language arts/literacy and mathematics that are designed to help prepare all students to graduate high school college- and career-ready. [READ MORE](#)

**SMARTER EN ESPAÑOL**

Aprenda más sobre las nuevas valoraciones designadas para ayudar a todos los estudiantes a graduarse de la preparatoria listos para la universidad y el empleo. [Más](#)

**Latest News**

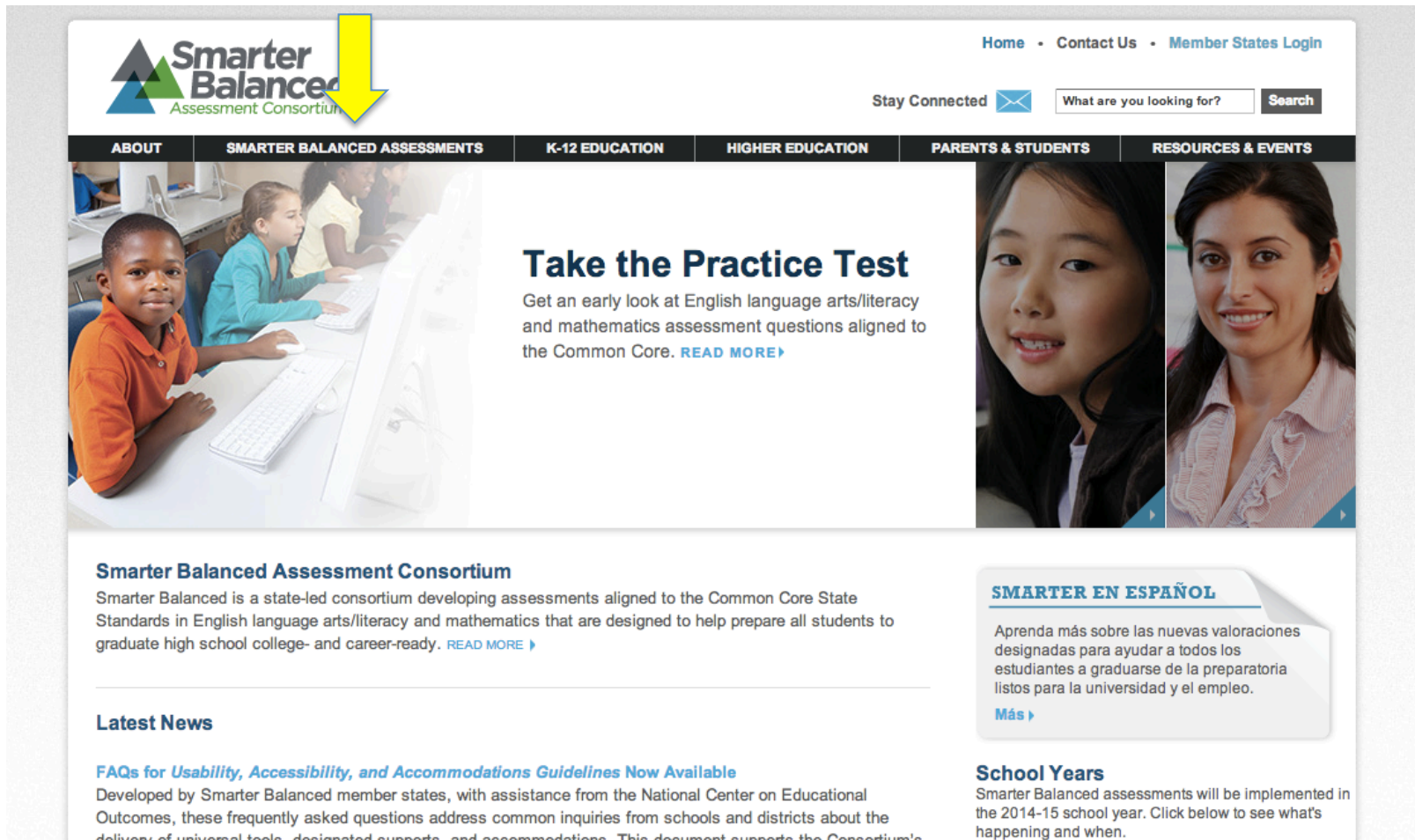
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Developed by Smarter Balanced member states, with assistance from the National Center on Educational Outcomes, these frequently asked questions address common inquiries from schools and districts about the delivery of universal tools, designated supports, and accommodations. This document supports the Consortium's

**School Years**

Smarter Balanced assessments will be implemented in the 2014-15 school year. Click below to see what's happening and when.

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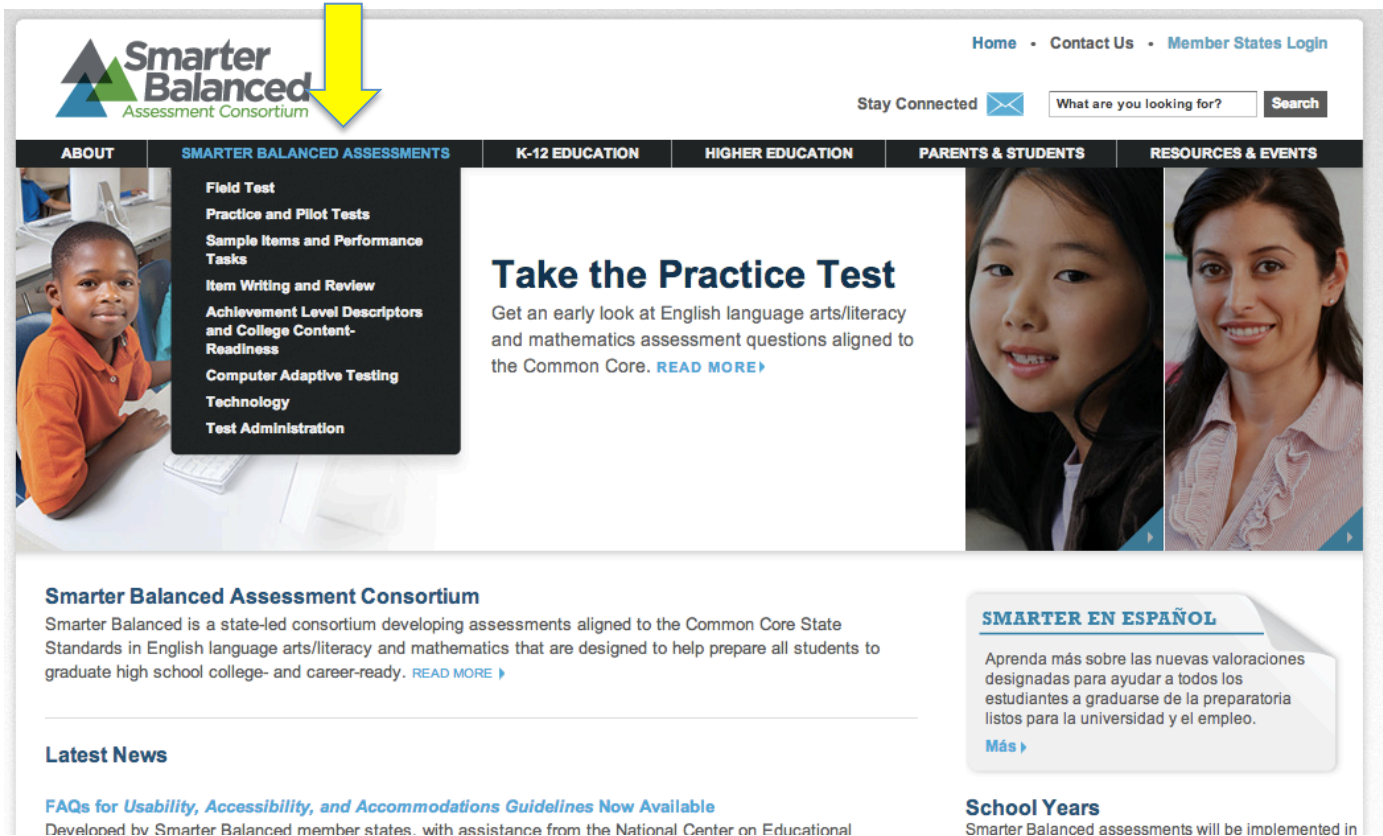
## Content Specifications

Smarter Balanced is developing content specifications in English language arts/literacy and mathematics to ensure that the assessments cover the range of knowledge and skills in the Common Core State Standards. Once finalized, the content specifications will serve as the basis for the Smarter Balanced system of summative and interim assessments and formative assessment support for teachers.

Dr. Linda Darling-Hammond, Smarter Balanced Senior Research Advisor and professor of education at the Stanford University School of Education, led the development of the content specifications in collaboration with experts in the field. The Smarter Balanced Technical Advisory Committee, Consortium work groups, and the lead authors of the Common Core State Standards also contributed to the documents. Hundreds of organizations and individual stakeholders provided feedback during two rounds of public comment.

- [English Language Arts/Literacy Content Specifications \(1/6/12 draft\)](#) 
- [ELA/Literacy Appendices D-F \(9/19/11 draft\)](#)
- [ELA/Literacy Webinar \(YouTube\)](#) ([SchoolTube](#))
- [Mathematics Content Specifications \(3/20/12 draft\)](#) 
- [Mathematics Webinar \(YouTube\)](#) ([SchoolTube](#))

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[Más](#)

**School Years**  
Smarter Balanced assessments will be implemented in

# Live to Site: Smarter Balanced



## Please Sign In

**Guest User**

First Name:

State-SSID:   
(ex: ST-9999999123)

**Guest Session**

Session ID:

To log in to the Practice Test, simply select [Sign In], then navigate through the login screens.

Browser: Chrome v32.0.

# Live to Site: Smarter Balanced



## Your Tests

Select a test.



**Start G3 Math**

This is opportunity 1 of 50



**Start G3 ELA**

This is opportunity 1 of 50



**Start G3 Math Performance Task**

This is opportunity 1 of 50



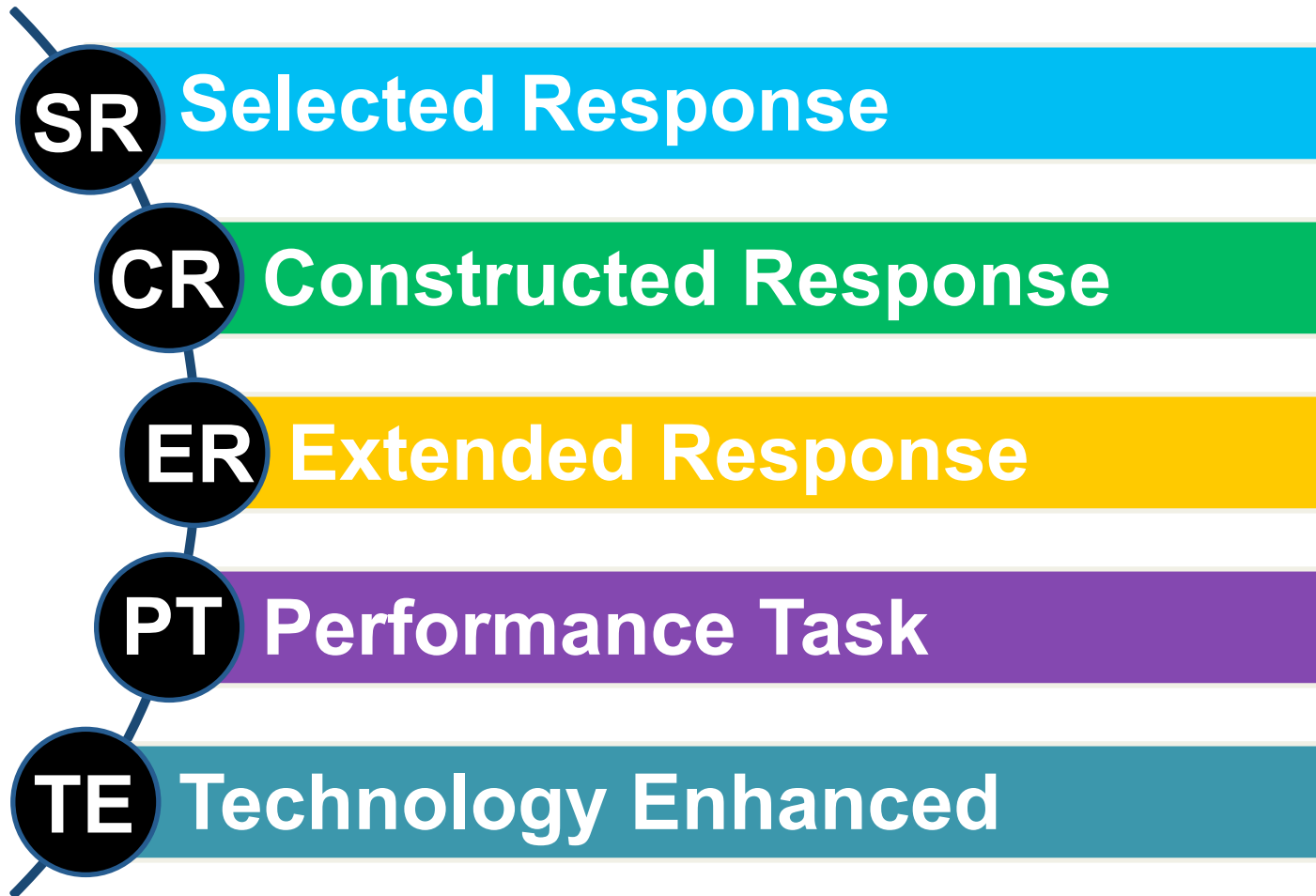
**Start G3 ELA Performance Task**

This is opportunity 1 of 50

[Back to Login](#)

**Share**

# Assessment Item Types





# Assessment Item Review Task

Assessment Item Review					
Item No.	Assessment Item	What do the assessment items tell us? What do they NOT tell us? What level of <u>DoK</u> ?	What is "unique" about this type of assessment item?		
1	<p style="text-align: center; color: blue;">Read all parts of the question before responding</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><b>Part A</b></p> <p>What is one main idea of "How Animals Live"?</p> <p><input type="checkbox"/> a. There are many types of animals on the planet.</p> <p><input type="checkbox"/> b. Animals need water to live.</p> <p><input type="checkbox"/> c. There are many ways to sort different animals.</p> <p><input type="checkbox"/> d. Animals begin their life cycles in different forms.</p> </td> <td style="width: 50%; vertical-align: top;"> <p><b>Part B</b></p> <p>Which detail from the article best supports the answer to Part A?</p> <p><input type="checkbox"/> a. "Animals get oxygen from air or water."</p> <p><input type="checkbox"/> b. "Animals can be grouped by their traits."</p> <p><input type="checkbox"/> c. "Worms are invertebrates."</p> <p><input type="checkbox"/> d. "All animals grow and change over time."</p> <p><input type="checkbox"/> e. "Almost all animals need water, food, oxygen, and shelter to live."</p> </td> </tr> </table>	<p><b>Part A</b></p> <p>What is one main idea of "How Animals Live"?</p> <p><input type="checkbox"/> a. There are many types of animals on the planet.</p> <p><input type="checkbox"/> b. Animals need water to live.</p> <p><input type="checkbox"/> c. There are many ways to sort different animals.</p> <p><input type="checkbox"/> d. Animals begin their life cycles in different forms.</p>	<p><b>Part B</b></p> <p>Which detail from the article best supports the answer to Part A?</p> <p><input type="checkbox"/> a. "Animals get oxygen from air or water."</p> <p><input type="checkbox"/> b. "Animals can be grouped by their traits."</p> <p><input type="checkbox"/> c. "Worms are invertebrates."</p> <p><input type="checkbox"/> d. "All animals grow and change over time."</p> <p><input type="checkbox"/> e. "Almost all animals need water, food, oxygen, and shelter to live."</p>		
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3	<p>A student is writing a story for class. She needs to correct the punctuation mistakes in her paragraph. Read this paragraph from her story and the directions that follow.</p> <p style="padding-left: 40px;">We were eating supper last night when we heard a huge crash from outside. What had happened. For about ten seconds, we all sat there wondering, and looking at each other. My dad stood up, and we followed him into the yard to see what had caused the loud noise. A giant branch had fallen off the oak tree next to the house. If it had dropped just three feet to the left, it would have crashed right through the roof!</p> <p>Click to highlight <b>two</b> sentences that do <b>not</b> have correct punctuation.</p>				

# Conceptual Framework

## ***Assessment Claims***

- Broad statements of the assessment system's learning outcomes, each of which requires evidence

## ***Assessment Targets/ Evidence***

- Articulates the types of data/observations that will support interpretations of competence towards achievement of the claims

## ***Interpretations***

- Identified in the Achievement Level Descriptors

# Content Specifications

- 1. Create a connection between standards, assessment, and instruction**
- 2. Organize the standards around major constructs and big ideas**
- 3. Further describe what students should learn and be able to do to demonstrate evidence of their learning**



# ELA Assessment Claims

## Claim #1

Students can read closely and analytically to comprehend a range of increasingly complex literary and informational texts.

## Claim #2

Students can produce effective and well-grounded writing for a range of purposes and audiences.

## Claim #3

Students can employ effective speaking and listening skills for a range of purposes and audiences.

## Claim #4

Students can engage in research/inquiry to investigate topics, and to analyze, integrate, and present information.

# Math Assessment Claims

## **Claim #1: Concepts & Procedures**

Students can explain and apply mathematical concepts and interpret and carry out mathematical procedures with precision and fluency.||

## **Claim #2: Problem Solving**

Students can solve a range of complex well-posed problems in pure and applied mathematics, making productive use of knowledge and problem solving strategies.||

## **Claim #3: Communicating Reasoning**

Students can clearly and precisely construct viable arguments to support their own reasoning and to critique the reasoning of others.||

## **Claim #4: Modeling and Data Analysis**

Students can analyze complex, real-world scenarios and can construct and use mathematical models to interpret and solve problems.||

# Connection Between Idaho Core Standards & Content Specifications

Operations and Algebraic Thinking	3.OA
<b>Represent and solve problems involving multiplication and division.</b>	
<ol style="list-style-type: none"> <li>Interpret products of whole numbers, e.g., interpret <math>5 \times 7</math> as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as <math>5 \times 7</math>.</li> <li>Interpret whole-number quotients of whole numbers, e.g., interpret <math>56 \div 8</math> as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as <math>56 \div 8</math>.</li> <li>Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.<sup>1</sup></li> <li>Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations <math>8 \times 7 = 48</math>, <math>5 = \square \times 3</math>, <math>6 \times 6 = 2</math>.</li> </ol>	
<b>Understand properties of multiplication and the relationship between multiplication and division.</b>	
<ol style="list-style-type: none"> <li>Apply properties of operations as strategies to multiply and divide.<sup>2</sup> Examples: If <math>6 \times 4 = 24</math> is known, then <math>4 \times 6 = 24</math> (Commutative property of multiplication), <math>3 \times 5 \times 2</math> can be calculated as <math>15 \times 2 = 30</math>, or by <math>5 \times 2 = 10</math>, then <math>3 \times 10 = 30</math> (Associative property of multiplication), knowing that <math>8 \times 5 = 40</math> and can find <math>8 \times 7</math> as <math>8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16</math> (Distributive property).</li> <li>Understand division as an unknown-factor problem. For example, find <math>32 \div 8</math> by finding the number that makes 32 when multiplied by 8.</li> </ol>	
<b>Multiply and divide within 100.</b>	
<ol style="list-style-type: none"> <li>Fluently multiply and divide within 100, using strategies based on the relationship between multiplication and division (e.g., <math>5 \times 40</math>, one knows <math>40 \div 5 = 8</math>) or properties of operations. For example, know from memory all products of one-digit numbers.</li> </ol>	
<b>Solve problems involving the four operations, and identify and explain patterns in arithmetic.</b>	
<ol style="list-style-type: none"> <li>Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.<sup>3</sup></li> <li>Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.</li> </ol>	

**Domain = Content Category**

GRADE 3 Summative Assessment Targets Providing Evidence Supporting Claim #1
<b>Claim #1: Students can explain and apply mathematical concepts and carry out mathematical procedures with precision and fluency.</b>
Content for this claim may be drawn from any of the Grade 3 clusters represented below, with a much greater proportion drawn from clusters designated "m" (major) and the remainder drawn from clusters designated "a/s" (additional/supporting) – with these items fleshing out the major work of the grade. Sampling of Claim #1 assessment targets will be determined by balancing the content assessed with items and tasks for Claims #2, #3, and #4. <sup>1</sup> Grade level content emphases are summarized in Appendix A and CAT sampling proportions for Claim 1 are given in Appendix B.
Operations and Algebraic Thinking
<p><b>Target A [m]: Represent and solve problems involving multiplication and division.<sup>4</sup> (DOK 1, 2)</b> Items/tasks for this target require students to use multiplication and division within 100 to solve straightforward, one-step contextual word problems in situations involving equal groups, arrays, and measurement quantities, such as length, liquid volume, and masses/weights of objects. These problems should be of the equal groups and arrays-situation types, but can include more difficult measurement situations. All of these items/tasks will code straightforwardly to standard 3.OA.3. Few of these items/tasks will make the method of solution a separate target of assessment. Other items/tasks for this target will probe student understanding of the meanings of multiplication and division.</p> <p>Items/tasks that explicitly ask the student to determine the unknown number in a multiplication or division equation relating three whole numbers (3.OA.4) will support the development of this target. A range of difficulty necessary for populating an adaptive item bank (see section 3.1.2, <i>Assessment Targets in an Adaptive Framework</i>, below, for further explication).</p> <p>Items/tasks that understand properties of multiplication and the relationship between multiplication and division (3.OA.3) will focus more on the practical uses of multiplication and division, Target B focuses more on the mathematical properties of these operations, including the mathematical relationship between multiplication and division. Tasks associated with this target are not intended to be vocabulary exercises along the lines of "which of these illustrates the distributive property?" As indicated by the CCSSM,<sup>4</sup> students need not know the formal names for the properties of operations. Instead, tasks are to probe whether students are able to use the properties to multiply and divide. Note, tasks that code directly to Target B will be limited to the 10x10 times table. (But see Target E under 3.NBT below.)</p>
<b>Target C [m]: Multiply and divide within 100. (DOK 1)</b>

# Connection Between Idaho Core Standards & Content Specifications

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<b>Understand properties of multiplication and the relationship between multiplication and division.</b>	
<ol style="list-style-type: none"> <li>Apply properties of operations as strategies to multiply and divide. (Comm.) For example, recognize that <math>8 \times 5 = 40</math>, so a group of 20 can be found by <math>4 \times 5</math> or <math>5 \times 4</math>.</li> <li>Understand that multiplication is an extension of repeated addition and division is an extension of repeated subtraction. For example, find <math>32 \div 8</math> by using the fact that <math>4 \times 8 = 32</math>.</li> </ol>	
<b>Multiply and divide within 100.</b>	
<ol style="list-style-type: none"> <li>Fluently multiply and divide within 100, using strategies such as the distributive property, area models, and the relationship between multiplication and division. (e.g., knowing that <math>8 \times 5 = 40</math>, one can find <math>40 \div 8 = 5</math>.) Know from memory all products of two one-digit numbers.</li> </ol>	
<b>Solve problems involving the four operations, and identify and explain patterns in arithmetic.</b>	
<ol style="list-style-type: none"> <li>Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.<sup>2</sup></li> <li>Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.</li> </ol>	

**Cluster Heading 1 = Target A**

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<b>Target A [m]: Represent and solve problems involving multiplication and division.</b> <sup>4</sup> (DOK 1, 2) Items/tasks for this target require students to use multiplication and division within 100 to solve straightforward, one-step contextual word problems in situations involving equal groups, arrays, and measurement quantities such as length, liquid volume, and masses/weights of objects. These problems should be of the equal-groups and arrays-situation types, but can include more difficult measurement quantity situations. All of these items/tasks will code straightforwardly to standard 3.OA.3. Few of these tasks coding to this standard will make the method of solution a separate target of assessment. Other tasks associated with this target will probe student understanding of the meanings of multiplication and division (3.OA.1,2). <sup>7</sup>
Non-contextual tasks that explicitly ask the student to determine the unknown number in a multiplication or division equation relating three whole numbers (3.OA.4) will support the development of items that provide a range of difficulty necessary for populating an adaptive item bank (see section <i>Understanding Assessment Targets in an Adaptive Framework</i> , below, for further explication).
<b>Target B [m]: Understand properties of multiplication and the relationship between multiplication and division.</b> (DOK 1) Whereas Target A focuses more on the practical uses of multiplication and division, Target B focuses more on the mathematical properties of these operations, including the mathematical relationship between multiplication and division. Tasks associated with this target are not intended to be vocabulary exercises along the lines of "which of these illustrates the distributive property?" As indicated by the CCSSM, <sup>4</sup> students need not know the formal names for the properties of operations. Instead, tasks are to probe whether students are able to use the properties to multiply and divide. Note, tasks that code directly to Target B will be limited to the 10x10 times table. (But see Target E under 3.NBT below.)
<b>Target C [m]: Multiply and divide within 100.</b> (DOK 1)

# Connection Between Idaho Core Standards & Content Specifications

Operations and Algebraic Thinking	3.OA
<b>Represent and solve problems involving multiplication and division.</b>	
<ol style="list-style-type: none"> <li>Interpret products of whole numbers, e.g., interpret <math>5 \times 7</math> as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as <math>5 \times 7</math>.</li> <li>Interpret whole-number quotients of whole numbers, e.g., interpret <math>56 \div 8</math> as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as <math>56 \div 8</math>.</li> <li>Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.<sup>1</sup></li> <li>Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations <math>8 \times 7 = 48</math>, <math>5 = \square \times 3</math>, <math>6 \times 6 = 2</math>.</li> </ol>	
<b>Understand properties of multiplication and the relationship between multiplication and division.</b>	
<ol style="list-style-type: none"> <li>Apply properties of operations as strategies to multiply and divide.<sup>2</sup> Examples: If <math>6 \times 4 = 24</math> is known, then <math>4 \times 6 = 24</math> is also known. (Commutative property of multiplication.) <math>3 \times 5 \times 2</math> can be found by <math>3 \times 5 = 15</math>, then <math>15 \times 2 = 30</math>, or by <math>3 \times 2 = 6</math>, then <math>6 \times 5 = 30</math>. (Associative property of multiplication.) Knowing that <math>8 \times 5 = 40</math> and <math>8 \times 2 = 16</math>, one can find <math>8 \times 7</math> as <math>8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56</math>. (Distributive property.)</li> <li>Understand division as an unknown-factor problem. For example, find <math>32 \div 8</math> by finding the number that makes 32 when multiplied by 8.</li> </ol>	
<b>Multiply and divide within 100.</b>	
<ol style="list-style-type: none"> <li>Fluently multiply and divide within 100, using the relationship between multiplication and division (e.g., knowing <math>40 \div 5 = 8</math>) or properties of operations. (Grade 3, know from memory all products of one-digit numbers.)</li> </ol>	
<b>Solve problems involving the four operations, and explain patterns in arithmetic.</b>	
<ol style="list-style-type: none"> <li>Solve two-step word problems using the four operations, representing unknowns in all positions. Use equations with a symbol for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies.</li> <li>Identify arithmetic patterns (including multiplication tables), and explain the patterns. For example, observe that 4 times a number is always 4 times a number can be decomposed...</li> </ol>	

**Cluster Heading 2 = Target B**

GRADE 3 Summative Assessment Targets Providing Evidence Supporting Claim #1
<b>Claim #1: Students can explain and apply mathematical concepts and carry out mathematical procedures with precision and fluency.</b>
Content for this claim may be drawn from any of the Grade 3 clusters represented below, with a much greater proportion drawn from clusters designated "m" (major) and the remainder drawn from clusters designated "a/s" (additional/supporting) – with these items fleshing out the major work of the grade. Sampling of Claim #1 assessment targets will be determined by balancing the content assessed with items and tasks for Claims #2, #3, and #4. <sup>3</sup> Grade level content emphases are summarized in Appendix A and CAT sampling proportions for Claim 1 are given in Appendix B.
Operations and Algebraic Thinking
<b>Target A [m]: Represent and solve problems involving multiplication and division.<sup>4</sup> (DOK 1, 2)</b> Items/tasks for this target require students to use multiplication and division within 100 to solve straightforward, one-step contextual word problems in situations involving equal groups, arrays, and measurement quantities such as length, liquid volume, and masses/weights of objects. These problems should be of the equal-groups and arrays-situation types, but can include more difficult measurement quantity situations. All of these items/tasks will code straightforwardly to standard 3.OA.3. Few of these tasks coding to this standard will make the method of solution a separate target of assessment. Other tasks associated with this target will probe student understanding of the meanings of multiplication and division (3.OA.1,2). <sup>7</sup>
Non-contextual tasks that explicitly ask the student to determine the unknown number in a multiplication or division equation relating three whole numbers (3.OA.4) will support the development of items that provide a range of difficulty necessary for populating an adaptive item bank (see section <i>Understanding Assessment Targets in an Adaptive Framework</i> , below, for further explication.).
<b>Target B [m]: Understand properties of multiplication and the relationship between multiplication and division. (DOK 1)</b> Where Target A focuses more on the practical uses of multiplication and division, Target B focuses more on the mathematical properties of these operations, including the mathematical relationship between multiplication and division. Tasks associated with this target are not intended to be vocabulary exercises along the lines of "which of these illustrates the distributive property?" As indicated by the CCSSM, <sup>4</sup> students need not know the formal names for the properties of operations. Instead, tasks are to probe whether students are able to use the properties to multiply and divide. Note, tasks that code directly to Target B will be limited to the 10x10 times table. (But see Target E under 3.NBT below.)
<b>Target C [m]: Multiply and divide within 100. (DOK 1)</b>



# Connection Between Idaho Core Standards & Content Specifications

## Operations and Algebraic Thinking 3.OA

### Represent and solve problems involving multiplication and division.

1. Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as  $5 \times 7$ .
2. Interpret whole-number quotients of whole numbers, e.g., interpret  $56 \div 8$  as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as  $56 \div 8$ .
3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations  $8 \times 7 = 48$ ,  $5 = \square \div 3$ ,  $6 \times 6 = 2$ .

### Understand properties of multiplication and the relationship between multiplication and division.

5. Apply properties of operations as strategies to multiply and divide.<sup>2</sup> Examples: If  $6 \times 4 = 24$  is known, then  $4 \times 6 = 24$  is also known (Commutative property of multiplication);  $3 \times 5 = 15$ , then  $15 \times 2 = 30$ ; or by  $5 \times 2 = 10$ , then  $10 \times 3 = 30$  (Associative property of multiplication); knowing that  $8 \times 5 = 40$ , one can find  $8 \times 7$  as  $8 \times (5 + 2) = (8 \times 5) + (8 \times 2)$  (Distributive property).
6. Understand division as an unknown-factor problem. For example, solve  $32 \div 8$  by finding the number that makes  $32$  when multiplied by  $8$ .

### Multiply and divide within 100.

7. Fluently multiply and divide within 100, using the relationship between multiplication and division (e.g., knowing  $5 \times 6 = 30$ , one knows  $30 \div 5 = 6$ ) or properties of operations. For example, use the distributive property to multiply  $26 \times 12$  by knowing from memory all products from  $2 \times 12$  to  $5 \times 12$ .

### Solve problems involving the four operations, and identify and explain patterns in arithmetic.

8. Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.<sup>3</sup>
9. Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.

Standards = Evidence

## GRADE 3 Summative Assessment Targets

### Providing Evidence Supporting Claim #1

**Claim #1: Students can explain and apply mathematical concepts and carry out mathematical procedures with precision and fluency.**

Content for this claim may be drawn from any of the Grade 3 clusters represented below, with a much greater proportion drawn from clusters designated "m" (major) and the remainder drawn from clusters designated "a/s" (additional/supporting) – with these items fleshing out the major work of the grade. Sampling of Claim #1 assessment targets will be determined by balancing the content assessed with items and tasks for Claims #2, #3, and #4.<sup>1</sup> Grade level content emphases are summarized in Appendix A and CAT sampling proportions for Claim 1 are given in Appendix B.

### Operations and Algebraic Thinking

**Target A [m]: Represent and solve problems involving multiplication and division.**<sup>4</sup> (DOK 1, 2) Items/tasks for this target require students to use multiplication and division within 100 to solve straightforward, one-step contextual word problems in situations involving equal groups, arrays, and measurement quantities such as length, liquid volume, and masses/weights of objects. These problems should be of the equal-groups and arrays-situation types, but can include more difficult measurement quantity situations. All of these items/tasks will code straightforwardly to standard 3.OA.3. Few of these items/tasks relating to this standard will code the method of solution a separate target of assessment. Other items/tasks associated with this target will probe student understanding of the meanings of multiplication and division (3.OA.1,2).<sup>7</sup>

Contextual tasks that explicitly ask the student to determine the unknown number in a multiplication or division equation relating three whole numbers (3.OA.4) will support the development of this target. A range of difficulty necessary for populating an adaptive item bank (see section on *Assessment Targets in an Adaptive Framework*, below, for further explication).

**Target B [a]: Understand properties of multiplication and the relationship between multiplication and division.** (DOK 1)

Target A focuses more on the practical uses of multiplication and division, Target B focuses on the mathematical properties of these operations, including the mathematical relationship between multiplication and division. Tasks associated with this target are not intended to be vocabulary exercises along the lines of "which of these illustrates the distributive property?" As indicated by the CCSSM,<sup>4</sup> students need not know the formal names for the properties of operations. Instead, tasks are to probe whether students are able to use the properties to multiply and divide. Note, tasks that code directly to Target B will be limited to the 10x10 times table. (But see Target E under 3.NBT below.)

**Target C [m]: Multiply and divide within 100.** (DOK 1)

# How to Read the Content Specifications Document

## GRADE 3 Summative Assessment Targets Providing Evidence Supporting Claim #1

**Claim #1: Students can explain and apply mathematical concepts and carry out mathematical procedures with precision and fluency.**

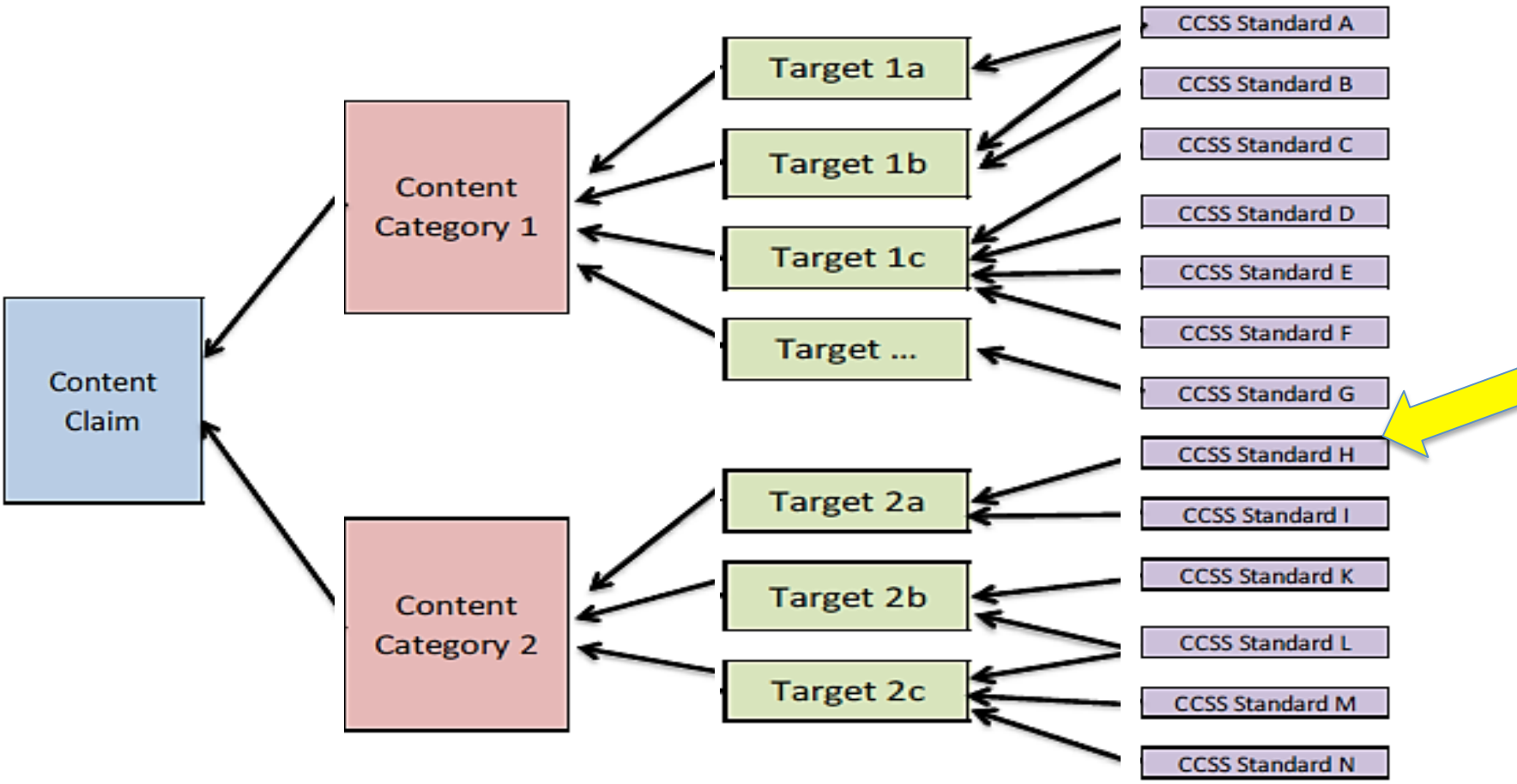
Content for this claim may be drawn from any of the Grade 3 clusters represented below, with a much greater proportion drawn from clusters designated “m” (major) and the remainder drawn from clusters designated “a/s” (additional/supporting) – with these items fleshing out the major work of the grade. Sampling of Claim #1 assessment targets will be determined by balancing the content assessed with items and tasks for Claims #2, #3, and #4.<sup>5</sup> Grade level content emphases are summarized in Appendix A and CAT sampling proportions for Claim 1 are given in Appendix B.

### Operations and Algebraic Thinking

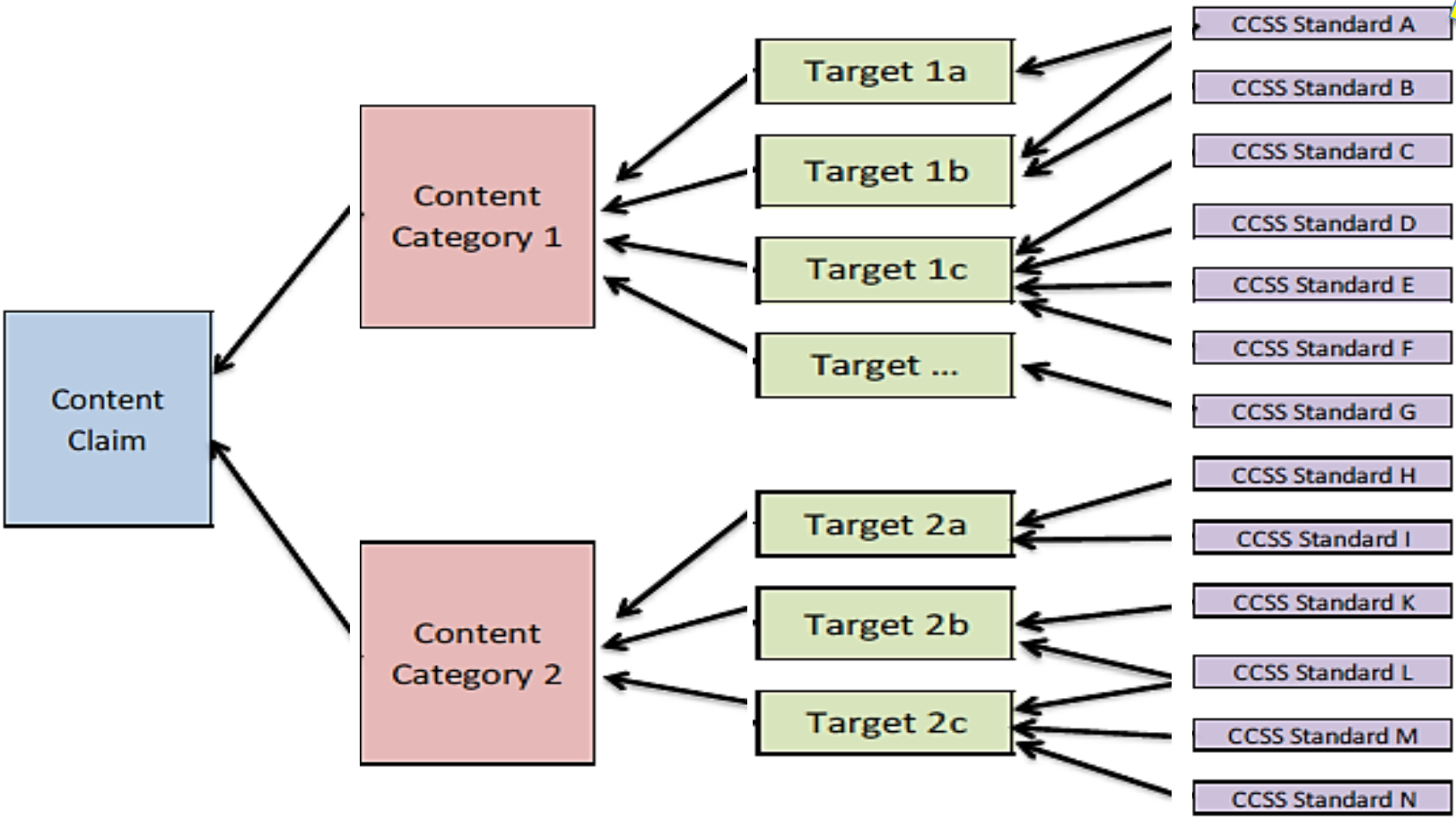
**Target A [m]: Represent and solve problems involving multiplication and division.<sup>6</sup> (DOK 1, 2)** Items/tasks for this target require students to use multiplication and division within 100 to solve straightforward, one-step contextual word problems in situations involving equal groups, arrays, and measurement quantities such as length, liquid volume, and masses/weights of objects. These problems be of the equal-groups and arrays-situation types, but can include more difficult measurement quantity situations. All of these items/tasks will code straightforwardly to standard 3.OA.3. Few of these tasks coding to this standard will make the method of solution a separate target of assessment. Other tasks associated with this target will probe student understanding of the meanings of multiplication and division (3.OA.1,2).<sup>7</sup>

Non-contextual tasks that explicitly ask the student to determine the unknown number in a multiplication or division equation relating three whole numbers (3.OA.4) will support the development

# How Do the Pieces Fit Together?



# How Do the Pieces Fit Together?

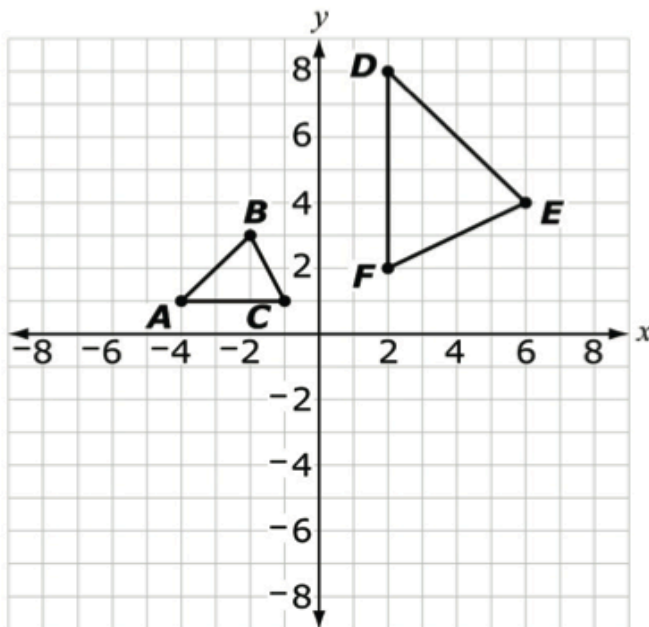


# Identify the Assessment Claims

Cali had 60 pounds of sand. The sand was measured equally into bags. Each bag held 10 pounds of sand. How many bags of sand did Cali have?

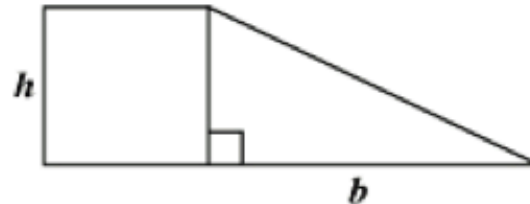
Bags

Triangles  $ABC$  and  $DEF$  are shown on this coordinate grid.



Describe a sequence of transformations that verify that these triangles are geometrically similar.

The figure below is made up of a square with height,  $h$  units, and a right triangle with height,  $h$  units, and base length,  $b$  units.



The area of this figure is 80 square units.

Write an equation that solves for the height,  $h$ , in terms of  $b$ .  
Show all work necessary to justify your answer.

$$h = \underline{\hspace{10em}}$$

DOK 2

# Understanding Item Specifications

## Item/Task Specifications

Item and performance task specifications provide guidance on how to translate the Smarter Balanced Content Specifications into actual assessment items. In addition, guidelines for bias and sensitivity, accessibility and accommodations, and style help item developers and reviewers ensure consistency and fairness across the item bank. The specifications and guidelines were reviewed by member states, school districts, higher education, and other stakeholders.

### Item Specifications

- [General Item Specifications \(PDF\)](#)
- [Smarter Balanced Bibliography \(PDF\)](#)

### English Language Arts/Literacy

- [ELA General Item and Task Specifications \(PDF\)](#)
  - [ELA Grades 3-5 \(ZIP\)](#)
  - [ELA Grades 6-8 \(ZIP\)](#)
  - [ELA Grades 9-11 \(ZIP\)](#)
- [ELA Rubrics \(PDF\)](#)
- [ELA Stimulus Specifications \(PDF\)](#)
  - [ELA Stimuli \(ZIP\)](#)
- [Issues Related to Stimulus and Item Development \(PDF\)](#)

### Mathematics

- [Mathematics General Item and Task Specifications Grades 3-5 \(PDF\)](#)
  - [Mathematics Grades 3-5 \(ZIP\)](#)
- [Mathematics General Item and Task Specifications Grades 6-8 \(PDF\)](#)
  - [Mathematics Grades 6-8 \(ZIP\)](#)
- [Mathematics General Item and Task Specifications High School \(PDF\)](#)
- [Mathematics High School \(ZIP\)](#)



# Understanding Item Specifications



Grade 3 Mathematics Item Specification C1 TA

- Claim
- Target(s)
- Content domain
- Standards associated with claim and target(s)
- Related standards for grades above and below
- DOK Level
- Achievement level descriptor
- Evidence required
- Construct-relevant vocabulary
- Sample items or question stems

<p><b>Claim 1:</b> Concepts and Procedures Students can explain and apply mathematical concepts and carry out mathematical procedures with precision and fluency.</p>	
<p>Content Domain: <b>Operations and Algebraic Thinking</b></p>	
<p><b>Target A [m]:</b> Represent and solve problems involving multiplication and division. (DOK 1)</p> <p>Tasks for this target require students to use multiplication and division <b>within</b> 100 using single-digit factors to solve straightforward, <b>one-step</b> contextual word problems in situations involving equal groups, arrays, and measurement quantities such as liquid volume and masses of objects. The majority of these problems should be of the equal groups and arrays situation types, with the more difficult measurement quantity situations in the minority. All of these tasks will code straightforwardly to standard 3.OA.3. Few of the tasks coding to this standard will make the method of solution a separate target of assessment.</p> <p>Non-contextual tasks that explicitly ask the student to determine the unknown number in a multiplication or division equation relating three whole numbers (3.OA.4) will support the development of items that provide a range of difficulty necessary for populating an adaptive item bank.</p> <p>The tasks coding to standards 3.OA.1 and 3.OA.2, which probe student understanding of the meanings of multiplication and division will be assessed through Claim 4.</p>	
<p>Standards: 3.OA.A, 3.OA.3, 3.OA.4</p>	<p><b>3.OA.A Represent and solve problems involving multiplication and division.</b></p> <p><b>3.OA.1:</b> Interpret products of whole numbers, e.g., interpret <math>5 \times 7</math> as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as <math>5 \times 7</math>.</p> <p><b>3.OA.2:</b> Interpret whole-number quotients of whole numbers, e.g., interpret <math>56 \div 8</math> as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as <math>56 \div 8</math>.</p>

**BREAK**

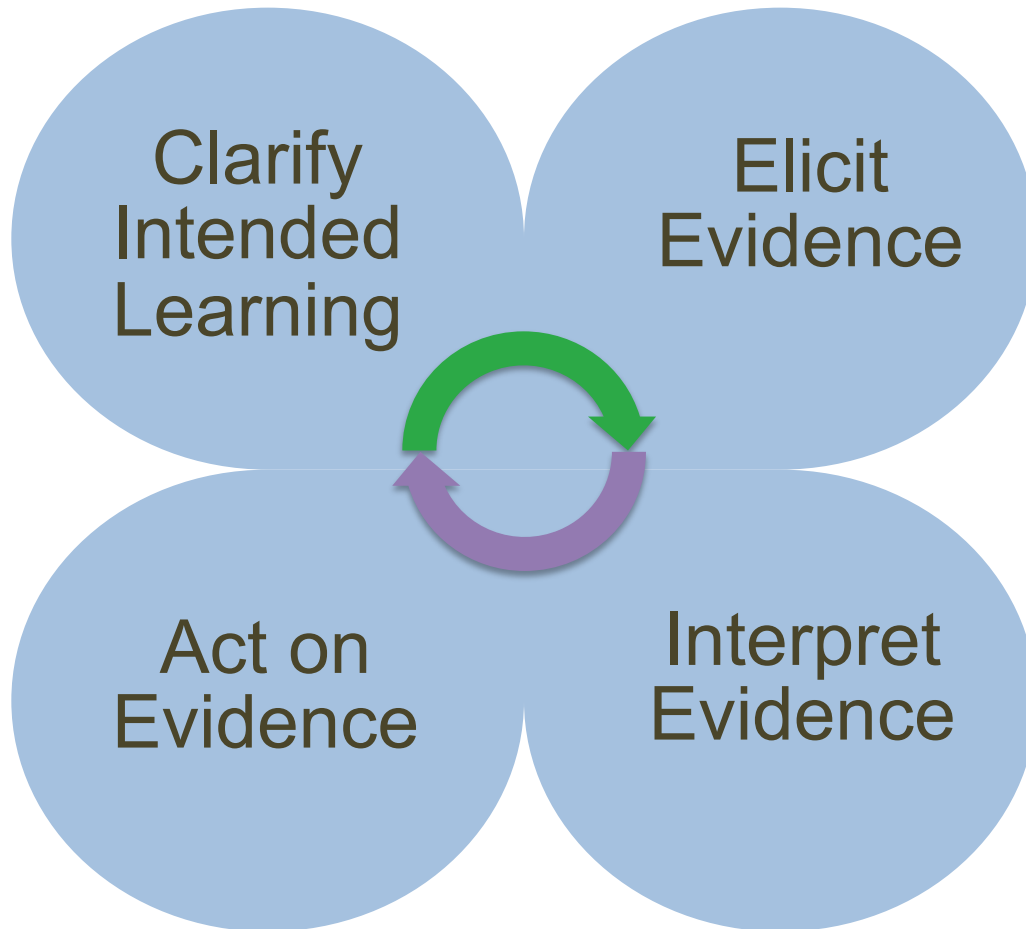
# Formative Assessment Process Defined



- Formative assessment is a deliberate ***process*** used by teachers and students ***during instruction*** that provides actionable feedback that is used to adjust ongoing teaching and learning strategies to improve students' self-assessment, reflection and attainment of curricular learning targets/goals.

# Four Attributes

The formative assessment process attributes are:



# Assessment Reflection

- How do you assess student learning?
- What do you do with assessment results?
- How do you grade student work?
- What is the role of homework in assessing progress?

# Assessment Walk

- Quotes are posted around the room.
- Silently read as many of the quotes you can.
- Summarize big ideas on handout.

# Share

DOK 3-4

# What Does It All Mean to Me?

Does anything in the research surprise you?  
How can you apply the concepts from the  
research?



# Digital Assessment Learning Targets

- I understand the assessment items found within Schoolnet to create effective formative assessments.
- I understand how to develop assessment tasks that are aligned with SBAC items and task types.
- I understand how to evaluate the quality of an assessment item.
- I understand how to write a performance task and rubric aligned to Idaho Core Standards expectations

# Exploring Digital Centers

**Creating and Searching  
Items in Schoolnet**

**Creating Quality Multiple  
Choice Items in Schoolnet**

**Analyzing and  
Creating Rubrics  
in Schoolnet**

**Creating Performance  
Tasks Using Schoolnet**

**Share**

**LUNCH**

# Activity: Assessment and Item Creation in Schoolnet

## Create



### Create an Express Test

Quicker

Select the standards you want covered, and an assessment will be created for you.

You can edit the structure at any point.

Start Now

### Create a Test Manually

More Flexible

Find items or write your own, and assemble an assessment with maximum flexibility.

Start Now

### Items

[Create an Item](#)

[Create a Passage](#)

[Create a Rubric](#)

[Pending Items](#)

**BREAK**

# Action Planning

## District Comprehensive Balanced Assessment Plan



Type of Assessment	National (N) State (S) District (D) School (B) Classroom (C)	Name of assessment	Purpose(s)	Who will use the resulting data?	Time Frame	Students / Grades Assessed	Professional Development Timeframe, Participants, Info	Administrative oversight (Name/Role)
Summative	State	ISAT	Accountability	All stakeholders		Gr. 3- 8, 9-11		
	District	EOCAs	Program and Teacher Evaluation	Teachers District Admin	Semester, End of Year, End of certain courses			
	National	NAEP	National Data Collection					
Interim/ Benchmark	District	CBMs	Teacher Evaluation, Placement into learning groups	District admin and teachers	3 times per year			
	State	IRI Screening	Determine risk for poor reading outcomes, Program Evaluation, State intervention \$					
Formative	(C) Teacher determined activities to elicit evidence of learning	Ex: student conferences, exit slips, non-graded quizzes, white boards. Other as determined by the teachers	Student. <del>teacher</del> feedback on current learning & teacher evaluation	Teachers and Students	Daily			
	Classroom	CBMs	Progress monitoring of Tier 2 and 3 students		2 x week	Students on intervention plans		
Diagnostic	Classroom	<i>Example: Core Phonics Survey</i>	Determine instructional needs of specific students			Students identified as at risk		



# Day Five Success Criteria

- I can explain a balanced assessment system.
- I can explain the Smarter Balanced content and item specifications and know where to find them.
- I can name and describe the four attributes of the formative assessment process.
- I can use Schoolnet for formative, interim, or summative assessments.