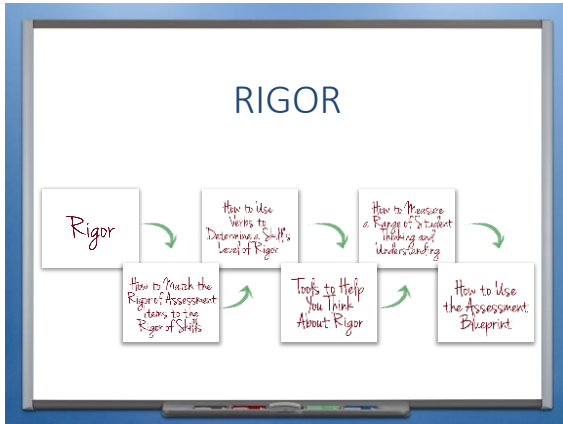
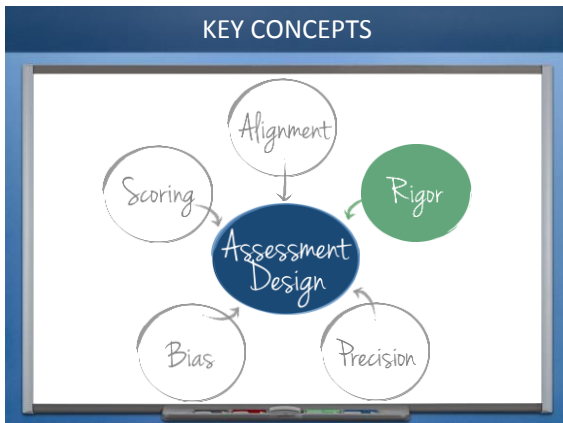
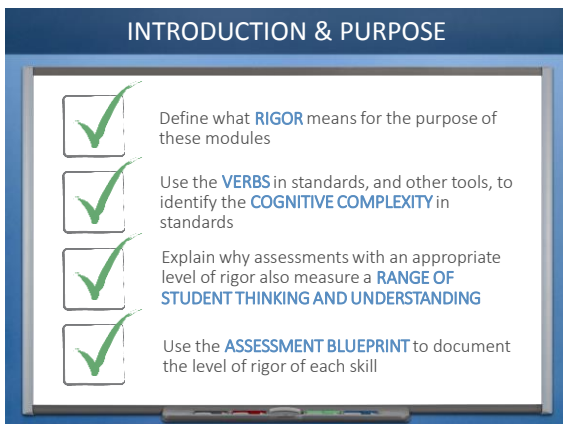


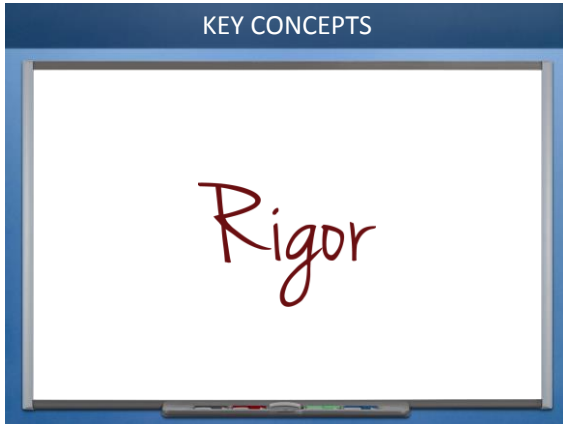
Rigor

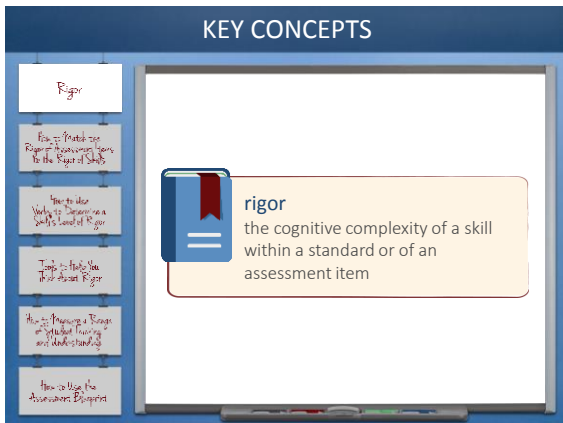


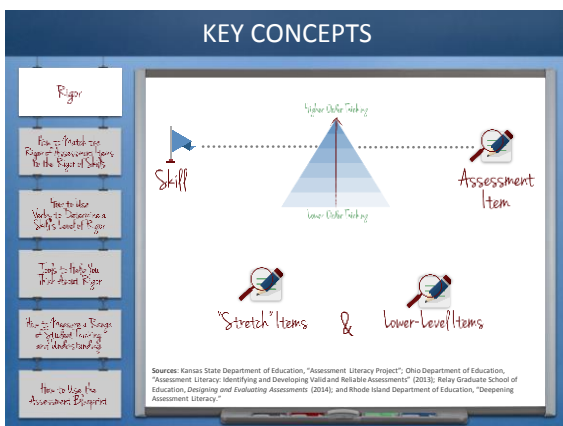




Rigor







Rigor

KEY CONCEPTS

How to Match the Rigor of Assessment Items to the Rigor of Skills

KEY CONCEPTS

Rigor

How to Match the Rigor of Assessment Items to the Rigor of Skills

How to Use Work to Determine a Student's Level of Rigor

How to Apply the Work to Assess Rigor

How to Prepare a Range of Instructional Items and Assessments

How to Use the Assessment Blueprint

Skill

Assessment Item

Higher Order Thinking

Lower Order Thinking

Standard

Skills

a

b

c

KEY CONCEPTS

Rigor

How to Match the Rigor of Assessment Items to the Rigor of Skills

How to Use Work to Determine a Student's Level of Rigor

How to Apply the Work to Assess Rigor

How to Prepare a Range of Instructional Items and Assessments

How to Use the Assessment Blueprint

Standard

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 $56 \div 8$.

Source: Tennessee Department of Education, "Tennessee's State Mathematics Standards: Grade 3" (2010).

KEY CONCEPTS

Rigor

- How to Pencil the Rigor of Assessment Items to the Rigor of Standards
- How to Use the Rigor of Assessment Items to the Rigor of Standards
- How to Use the Rigor of Assessment Items to the Rigor of Standards
- How to Use the Rigor of Assessment Items to the Rigor of Standards
- How to Use the Rigor of Assessment Items to the Rigor of Standards

Standard

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 $56 \div 8$.

Skills

→ Interpret whole-number quotients of whole numbers.

KEY CONCEPTS

Rigor

- How to Pencil the Rigor of Assessment Items to the Rigor of Standards
- How to Use the Rigor of Assessment Items to the Rigor of Standards
- How to Use the Rigor of Assessment Items to the Rigor of Standards
- How to Use the Rigor of Assessment Items to the Rigor of Standards
- How to Use the Rigor of Assessment Items to the Rigor of Standards

Standards

Classroom Assessments

Skills

→ Interpret whole-number quotients of whole numbers.

Assessment Item

What is $12 \div 3$?

KEY CONCEPTS

Rigor

- How to Pencil the Rigor of Assessment Items to the Rigor of Standards
- How to Use the Rigor of Assessment Items to the Rigor of Standards
- How to Use the Rigor of Assessment Items to the Rigor of Standards
- How to Use the Rigor of Assessment Items to the Rigor of Standards
- How to Use the Rigor of Assessment Items to the Rigor of Standards

Standard

Shift

Assessment Item

Skills

→ Interpret whole-number quotients of whole numbers.

Assessment Item

What is $12 \div 3$?

KEY CONCEPTS

Rigor

How to Practice the Rigor of Answering Items to the Rigor of Skills

How to Use Words to Describe a Skill's Level of Rigor

How to Apply the Rigor of Answering Items

How to Prepare a Range of Potential Answering and Understanding

How to Use the Assessment Equipment

Standard

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 $56 \div 8$.

Assessment Item

What is $12 \div 3$?

KEY CONCEPTS

Rigor

How to Practice the Rigor of Answering Items to the Rigor of Skills

How to Use Words to Describe a Skill's Level of Rigor

How to Apply the Rigor of Answering Items

How to Prepare a Range of Potential Answering and Understanding

How to Use the Assessment Equipment


Standard

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 $56 \div 8$.

Assessment Item

Suppose there are 4 tanks and 3 fish in each tank. The total number of fish in this situation can be expressed as $4 \times 3 = 12$.

- Describe what is meant in this situation by $12 \div 3 = 4$
- Describe what is meant in this situation by $12 \div 4 = 3$



Source: "Fish Tanks," Illustrative Mathematics

KEY CONCEPTS

Rigor

How to Practice the Rigor of Answering Items to the Rigor of Skills

How to Use Words to Describe a Skill's Level of Rigor

How to Apply the Rigor of Answering Items


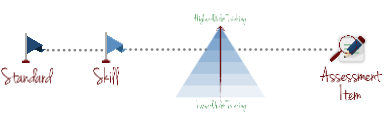
How to Prepare a Range of Potential Answering and Understanding

How to Use the Assessment Equipment

Assessment Item

Suppose there are 4 tanks and 3 fish in each tank. The total number of fish in this situation can be expressed as $4 \times 3 = 12$.

- Describe what is meant in this situation by $12 \div 3 = 4$
- Describe what is meant in this situation by $12 \div 4 = 3$

Rigor

KEY CONCEPTS

How to Use
Verbs to
Determine a Skill's
Level of Rigor

KEY CONCEPTS

Rigor

How to Practice the
Rigor of Answering Items
To the Rigor of Skills

How to Use
Verbs to Determine a
Skill's Level of Rigor

How to Apply the
Rigor of Answering Items

How to Practice a Range
of Skillful Thinking
and Understanding

How to Use the
Assessment Blueprint

Standard

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 $56 \div 8$.

~~"Division
Standard"~~

KEY CONCEPTS

Rigor

How to Practice the
Rigor of Answering Items
To the Rigor of Skills

How to Use
Verbs to Determine a
Skill's Level of Rigor

How to Apply the
Rigor of Answering Items

How to Practice a Range
of Skillful Thinking
and Understanding

How to Use the
Assessment Blueprint

Standard

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 $56 \div 8$.

~~"Division
Standard"~~

Rigor

KEY CONCEPTS

Rigor

How to Praise the Rigor of Answer Items to the Rigor of Shifts

How to Use Words to Describe a Shift's Level of Rigor

How to Help the Shift About Rigor

How to Prepare a Range of Potential Learning and Understanding

How to Use the Assessment Blueprint

Standard

Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.

Source: New York State Department of Education, "New York State P-12 Common Core Learning Standards for English Language Arts & Literacy" (2010).

KEY CONCEPTS

Rigor

How to Praise the Rigor of Answer Items to the Rigor of Shifts

How to Use Words to Describe a Shift's Level of Rigor

How to Help the Shift About Rigor

How to Prepare a Range of Potential Learning and Understanding

How to Use the Assessment Blueprint

Standard

Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.

KEY CONCEPTS

Rigor

How to Praise the Rigor of Answer Items to the Rigor of Shifts

How to Use Words to Describe a Shift's Level of Rigor

How to Help the Shift About Rigor

How to Prepare a Range of Potential Learning and Understanding

How to Use the Assessment Blueprint

Standard

Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.

Rigor

Rigor

How to Practice the Rigor of Assessment Items to the Rigor of Standards

How to Use Words to Demonstrate a Student's Level of Rigor


How to Apply the Rigor of Assessment Items

How to Prepare a Range of Student Learning and Understanding

How to Use the Assessment Equipment

Standard

Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.



Rigor

How to Practice the Rigor of Assessment Items to the Rigor of Standards

How to Use Words to Demonstrate a Student's Level of Rigor

How to Apply the Rigor of Assessment Items

How to Prepare a Range of Student Learning and Understanding

How to Use the Assessment Equipment

Standard

Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.

Assessment Item


Which of the following words is an antonym of "tense"?

a. troubled

b. calm

c. concerned

d. smooth



Rigor

How to Practice the Rigor of Assessment Items to the Rigor of Standards

How to Use Words to Demonstrate a Student's Level of Rigor

How to Apply the Rigor of Assessment Items

How to Prepare a Range of Student Learning and Understanding

How to Use the Assessment Equipment

Standard

Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.

Assessment Item

Which of the following words is an antonym of "tense"?

a. troubled

b. calm

c. concerned

d. smooth

8

Rigor

KEY CONCEPTS

Rigor

How to Practice the Rigor of Assessment Items to the Rigor of Skills

How to Use Words to Describe a Skill's Level of Rigor

Tools to Help You Think About Rigor

How to Prepare a Range of Potential Learning and Understanding

How to Use the Assessment Blueprint

Assessment Item

Read the passage below. Then answer the question.

Last year my family went to a national park for our vacation. We saw wild animals that we had seen only in books, and we were amazed by the landscape of trees and rivers. The highlight of the trip was an **arduous** hike we took to the top of a small mountain. Though the hike was not easy, due to all the loose rocks and exposed roots on the path, the spectacular view from the top was worth it!

What does the word "arduous" mean in this passage?

Source: "Part 6 Language, 6.3 Vocabulary Acquisition and Use: Antonyms," The McGraw-Hill Companies.

KEY CONCEPTS

Rigor

How to Practice the Rigor of Assessment Items to the Rigor of Skills

How to Use Words to Describe a Skill's Level of Rigor

Tools to Help You Think About Rigor

How to Prepare a Range of Potential Learning and Understanding

How to Use the Assessment Blueprint

Standard

Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.

Assessment Item

Read the passage below. Then answer the question.

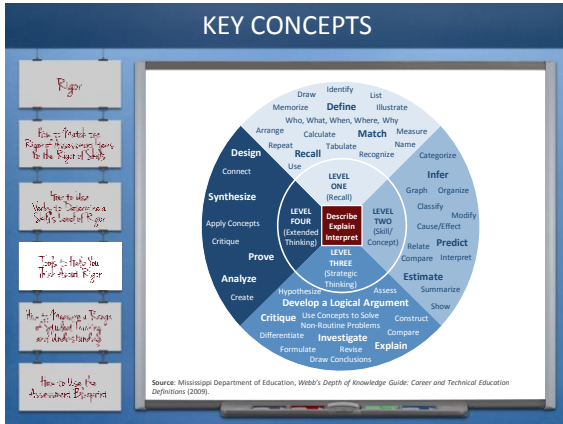
Last year my family went to a national park for our vacation. We saw wild animals that we had seen only in books, and we were amazed by the landscape of trees and rivers. The highlight of the trip was an **arduous** hike we took to the top of a small mountain. Though the hike was not easy, due to all the loose rocks and exposed roots on the path, the spectacular view from the top was worth it!

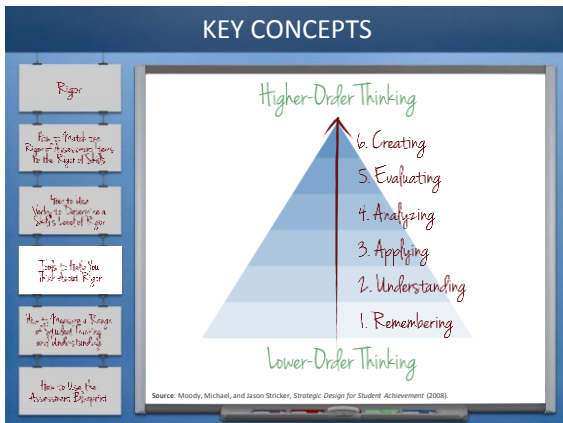
What does the word "arduous" mean in this passage?

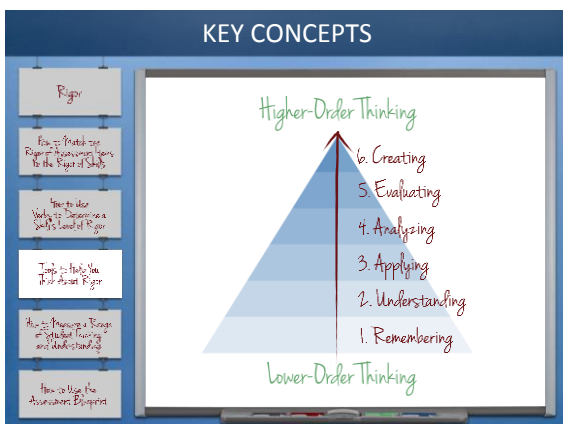
KEY CONCEPTS

Tools to Help You Think About Rigor

Rigor







Rigor

Rigor

KEY CONCEPTS

Standards

Present information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.

1. Remember
Remember Information

2. Understand
Explain Ideas or Concepts

3. Apply
Use Information in a New Way

4. Analyze
Distinguish Between Parts

5. Evaluate
Justify a Position or Decision

6. Create
Create a New Product or Point of View

Rigor

How to think up Rigorous Questions to ask to the Rigor of Skills

How to make Work to Develop a Skill's Level of Rigor

Try to find the Most About Rigor

How to measure a Range of Skill's Level of Rigor and Standards

How to Use the Assessment Blueprint

KEY CONCEPTS

How to Measure
a Range of Student
Thinking and
Understanding

KEY CONCEPTS

- Rigor
 - Focus on Practice and Rigor in Mathematics Items to the Degree of Substantive
 - How to also Verify to Support as a Student's Level of Rigor
 - Jump to Study the More About Rigor
 - How to Measure a Range of Student Learning and Student Learning
 - How to Use the Assessment Equipment

The diagram illustrates the relationship between different types of assessment items. At the top, three icons of a pencil and eraser are shown. Below them, the text 'Assessment Items' is written in a large, bold font. A green bracket underneath 'Assessment Items' points down to two categories: 'Stretch' Items and 'Lower-Level Items'. Each category is accompanied by an icon of a pencil and eraser.

Rigor

KEY CONCEPTS

Rigor

How to Pencil the Rigor of Answer Items to the Rigor of Shifts

How to Use Words to Describe a Shift's Level of Rigor

How to Use the Words to Describe Rigor

How to Prepare a Range of Student Thinking and Understanding

How to Use the Assessment Blueprint

KEY CONCEPTS

Rigor

How to Pencil the Rigor of Answer Items to the Rigor of Shifts

How to Use Words to Describe a Shift's Level of Rigor

How to Use the Words to Describe Rigor

How to Prepare a Range of Student Thinking and Understanding

How to Use the Assessment Blueprint

Standard

The student solves problems involving direct proportional relationships. The student is expected to estimate and find solutions to application problems involving percent; and estimate and find solutions to application problems involving proportional relationships such as similarity, scaling, unit costs, and related measurement units.

Source: Texas Education Agency Student Assessment Division, "Grade 7 Mathematics Assessment" (2010).

KEY CONCEPTS

Rigor

How to Pencil the Rigor of Answer Items to the Rigor of Shifts

How to Use Words to Describe a Shift's Level of Rigor

How to Use the Words to Describe Rigor

How to Prepare a Range of Student Thinking and Understanding

How to Use the Assessment Blueprint

Standard

The student solves problems involving direct proportional relationships. The student is expected to estimate and find solutions to application problems involving percent; and estimate and find solutions to application problems involving proportional relationships such as similarity, scaling, unit costs, and related measurement units.

'Stretch' Items & Lower-Level Items

KEY CONCEPTS

Rigor

How to Practice the Rigor of Problem Solving

How to Use the Rigor of Problem Solving

How to Practice the Rigor of Problem Solving

How to Practice the Rigor of Problem Solving

How to Practice the Rigor of Problem Solving

How to Practice the Rigor of Problem Solving

How to Practice the Rigor of Problem Solving

How to Practice the Rigor of Problem Solving

Assessment Item

- What is 67 percent of 81?
- Shawn got 7 correct answers out of 10 possible answers on his science test. What percentage of questions did he answer correctly?
- Adam was on pace to set a high-school basketball record for free throw percentage. Going into his senior year, he had made 97 of 104 free throw attempts. What percentage of free throws had he made?
- Adam and Jamie were competing for the best free throw percentage. Adam made 94 percent of his first 103 shots, whereas Jamie made 47 of 51 shots.
 - Which one had a better shooting percentage?
 - In the next game, Adam made only 2 of 10 shots, and Jamie made 7 of 10 shots. What are their new overall shooting percentages? Who is the better shooter?
 - Christine argued that if Adam and Jamie each made their next 10 shots, their shooting percentages would go up the same amount. Is this true? Why or why not? Describe in detail how you arrived at your answers.

Source: Paul Bambrick-Santoyo, "Data in the Driver's Seat" (2007–2008).

KEY CONCEPTS

Rigor

How to Practice the Rigor of Problem Solving

How to Use the Rigor of Problem Solving

How to Practice the Rigor of Problem Solving

How to Practice the Rigor of Problem Solving

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How to Practice the Rigor of Problem Solving

How to Practice the Rigor of Problem Solving

How to Practice the Rigor of Problem Solving

Standard

The student solves problems involving direct proportional relationships. The student is expected to estimate and find solutions to application problems involving percent; and estimate and find solutions to application problems involving proportional relationships such as similarity, scaling, unit costs, and related measurement units.

'Stretch' Items
&
Lower-Level Items

KEY CONCEPTS

Rigor

How to Practice the Rigor of Problem Solving

How to Use the Rigor of Problem Solving

How to Practice the Rigor of Problem Solving

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How to Practice the Rigor of Problem Solving

How to Practice the Rigor of Problem Solving

How to Use the Assessment Blueprint

KEY CONCEPTS

Rigor

How to Ponder the Rigor of Assessment Items to the Rigor of Skills

How to Use Verbs to Determine a Skill's Level of Rigor

How to Apply the What About Rigor

How to Prepare a Range of Potential Learning and Understanding

How to Use the Assessment Blueprint

5th Grade
Reading and Writing about Informational Texts

Standards → Classroom Assessments → Instruction

4 years

Sources: Ohio Department of Education, "Ohio's New Learning Standards: English Language Standards" (2010), Student Achievement Partners, "Mini Assessment for Who Was Marco Polo?" by Joan Holub and The Adventures of Marco Polo by Russell Freedman" (2014).

KEY CONCEPTS

Rigor

How to Ponder the Rigor of Assessment Items to the Rigor of Skills

How to Use Verbs to Determine a Skill's Level of Rigor

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How to Prepare a Range of Potential Learning and Understanding

How to Use the Assessment Blueprint

5th Grade
Reading and Writing about Informational Texts

Standards → Classroom Assessments → Instruction

4 years

Summative Assessment

KEY CONCEPTS

Rigor

How to Ponder the Rigor of Assessment Items to the Rigor of Skills

How to Use Verbs to Determine a Skill's Level of Rigor

How to Apply the What About Rigor

How to Prepare a Range of Potential Learning and Understanding

How to Use the Assessment Blueprint

5th Grade
Reading and Writing about Informational Texts

Standards → Classroom Assessments → Instruction

4 years

Summative Assessment

Primary Purpose

1. Primary Purpose of the Assessment		2. Standard(s) (one per row)		3. Skill(s) (one per row)		4. Level(s) of Rigor		5. Possible Type(s) of Items		
Reading	Reading Informational Text 1: Analyze a text's main purpose and supporting details; analyze a text's structure and organization; analyze a text's style and language.	Reading Informational Text 2: Analyze a text's main purpose and supporting details; analyze a text's structure and organization; analyze a text's style and language.	Reading Informational Text 3: Analyze a text's main purpose and supporting details; analyze a text's structure and organization; analyze a text's style and language.	Reading Informational Text 4: Analyze a text's main purpose and supporting details; analyze a text's structure and organization; analyze a text's style and language.	Reading Informational Text 5: Analyze a text's main purpose and supporting details; analyze a text's structure and organization; analyze a text's style and language.	Reading Informational Text 6: Analyze a text's main purpose and supporting details; analyze a text's structure and organization; analyze a text's style and language.	Reading Informational Text 7: Analyze a text's main purpose and supporting details; analyze a text's structure and organization; analyze a text's style and language.	Reading Informational Text 8: Analyze a text's main purpose and supporting details; analyze a text's structure and organization; analyze a text's style and language.	Reading Informational Text 9: Analyze a text's main purpose and supporting details; analyze a text's structure and organization; analyze a text's style and language.	Reading Informational Text 10: Analyze a text's main purpose and supporting details; analyze a text's structure and organization; analyze a text's style and language.
Writing	Writing 1: Write opinion pieces on topics or issues, supporting a point of view with reasons and information.	Writing 2: Write informative/explanatory texts in which they introduce a topic, provide needed background, establish a purpose, and include relevant information, data, and details.	Writing 3: Write narratives in which they recount an event or experience, describe a setting, and establish a purpose.	Writing 4: Write opinion pieces on topics or issues, supporting a point of view with reasons and information.	Writing 5: Write informative/explanatory texts in which they introduce a topic, provide needed background, establish a purpose, and include relevant information, data, and details.	Writing 6: Write narratives in which they recount an event or experience, describe a setting, and establish a purpose.	Writing 7: Write opinion pieces on topics or issues, supporting a point of view with reasons and information.	Writing 8: Write informative/explanatory texts in which they introduce a topic, provide needed background, establish a purpose, and include relevant information, data, and details.	Writing 9: Write narratives in which they recount an event or experience, describe a setting, and establish a purpose.	Writing 10: Write opinion pieces on topics or issues, supporting a point of view with reasons and information.

Rigor

KEY CONCEPTS

Rigor

How to Ponder the Rigor of Assessment Items to the Rigor of Skills

How to Use Verbs to Determine a Skill's Level of Rigor

How to Analyze the Rigor of an Assessment Item

How to Prepare a Range of Potential Learning and Understanding

How to Use the Assessment Blueprint

1. Primary Purpose of the Assessment		2. Skill(s) (one per row)		3. Level(s) of Rigor		4. Possible Type(s) of Items	
Reading Informational Text 4: Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.		Reading Informational Text 5: Determine how or main topic ideas of a text and explain how they are supported by key details; summarize the text.		Reading Informational Text 6: Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.		Reading Informational Text 7: Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s).	
Writing 5: Write opinion pieces on topics or texts, supporting a point of view with reasons and information.							

KEY CONCEPTS

Rigor

How to Ponder the Rigor of Assessment Items to the Rigor of Skills

How to Use Verbs to Determine a Skill's Level of Rigor

How to Analyze the Rigor of an Assessment Item

How to Prepare a Range of Potential Learning and Understanding

How to Use the Assessment Blueprint

3. Skill(s) (one per row)		4. Level(s) of Rigor	
Quote accurately from the text (explicitly and making inferences).			
Identify main ideas and how key details support them.			
Determine the meaning of new vocabulary words.			
Explain how the author uses evidence to support his or her claims.			
Write an opinion piece on texts.			
Support your point of view with evidence.			

KEY CONCEPTS

Rigor

How to Ponder the Rigor of Assessment Items to the Rigor of Skills

How to Use Verbs to Determine a Skill's Level of Rigor

How to Analyze the Rigor of an Assessment Item

How to Prepare a Range of Potential Learning and Understanding

How to Use the Assessment Blueprint

3. Skill(s) (one per row)		4. Level(s) of Rigor	
Quote accurately from the text (explicitly and making inferences).			
Identify main ideas and how key details support them.			
Determine the meaning of new vocabulary words.			
Explain how the author uses evidence to support his or her claims.			
Write an opinion piece on texts.			
Support your point of view with evidence.			

Rigor

KEY CONCEPTS

Rigor

Key to Pushing up Rigor of Science Tests to the Rigor of Science

Key to Pushing up Rigor of Science Tests to the Rigor of Science

Key to Pushing up Rigor of Science Tests to the Rigor of Science

Key to Pushing up Rigor of Science Tests to the Rigor of Science

Key to Pushing up Rigor of Science Tests to the Rigor of Science

1. Primary Purpose of the Assessment		2. Skills (one per row)			3. Level(s) of Rigor		4. Possible Type(s) of Item	
2. Standard(s) (one per row)	<p>Reading Informational Text 1: Cite accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.</p> <p>Reading Informational Text 2: Compare how two texts treat a topic and explain how they are supported by key details; summarize the text.</p> <p>Reading Informational Text 3: Analyze how a text uses specific details, examples, or data to support a main idea or thesis.</p> <p>Reading Informational Text 4: Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade's topic or subject area.</p> <p>Reading Informational Text 5: Analyze how an author uses relevant evidence to support particular points in a text, identifying which reasons and evidence support which point(s).</p> <p>Writing 1: Write opinion pieces on topics or texts, supporting one point of view with reasons and information.</p>	<p>Quote accurately from the text (explicitly and making inferences).</p> <p>Identify main ideas and supporting details (support them).</p> <p>Determine the meaning of new vocabulary words.</p> <p>Explain how the author uses evidence to support his/her claims.</p> <p>Write an opinion piece with evidence.</p> <p>Support your point of view with evidence.</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p>				
<p>Write and/or Select Assessment Topics</p>								
5. Student(s) and/or Skill(s)	Topic of Item	Level(s) of Rigor	# of Points	% of Assessment				
6. Data								

Key to Pushing up Rigor of Science Tests to the Rigor of Science

Key to Pushing up Rigor of Science Tests to the Rigor of Science

Key to Pushing up Rigor of Science Tests to the Rigor of Science

Key to Pushing up Rigor of Science Tests to the Rigor of Science

Key to Pushing up Rigor of Science Tests to the Rigor of Science

[illegible]

KEY CONCEPTS

Rigor

Five Practices for
Rigorous Mathematics
Learning in the High School

How to Use
This Document to Design
a High School Rigor
Plan

How to Use This
Document to Design
an Integrated Learning
and Assessment Plan

How to Use This
Assessment Blueprint

1. Primary Purpose of the Assessment		3. Skills (one per row)		Summary	
2. Standard(s) (one per row)				4. Level(s) of rigor	5. Possible Type(s) of Items
Reading/Informational Text 1: Cite specific textual evidence when explaining what the text says explicitly and when drawing inferences from the text.				1	<div style="border: 1px solid black; border-radius: 50%; padding: 20px; display: inline-block;"> Type(s) of Items </div>
Reading/Informational Text 2: Cite specific textual evidence from a text and explain how they are supported by key details; summarize the text.				2	
Reading/Informational Text 4: Determine the meaning of general academic and domain-specific words and phrases in text (relevant to grade's content area).				2	
Reading/Informational Text 6: Explain how the author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s).				4	
Writing 1: Write on given topics or issues in length, supporting a point of view with reasons and information.				5	
Write and Create Student Assessment Items					
Skill	Standard(s) to Measure	Level(s)	Level(s) of Rigor	% of Items	% of Assessment
Writing					

KEY CONCEPTS

Rigor

How to Foster the Rigor of Learning Goals to the Rigor of Skills

How to Use Working to Generate a Student's Level of Rigor

How to Make Use of an Absent Rigor

How to Measure a Range of Student Learning and Understanding

How to Use the Assessment Equipment

Higher-Order Thinking

6. Creating
5. Evaluating
4. Analyzing
3. Applying
2. Understanding
1. Remembering

Lower-Order Thinking

Remembering

Understanding

Applying

Rigor

KEY CONCEPTS

Rigor

For \rightarrow Fresh top
Rigor \rightarrow between 5th
to 8th grade

How to do
Work to Develop a
Student's level of Rigor

Topic is that the
Topic is that the
Topic is that the

How to Measure a Range
of Rigor for Learning
and Understanding

How to Use the
Assessment Blueprint

1. Primary Purpose of the Assessment		Summary		
2. Standard(s) (one per row)	3. Skill(s) (one per row)	4. Level(s) of Rigor	5. Possible Type(s) of Items	
Reading Informational Text 1: Cite accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.	Cite accurately from the text (explicitly and making inferences).	2	1	<div style="border: 1px solid blue; border-radius: 50%; padding: 20px; display: inline-block;"> Types of Items </div>
Reading Informational Text 2: Compare two or more issues, ideas of a text and explain how they are supported by key details; summarize the text.	Identify main ideas and how key details support them.	2	2	
Reading Informational Text 4: Compare the important general academic and domain-specific words and phrases in a text relevant to a grade's subject matter.	Determine the meaning of new vocabulary words.	2	3R	
Reading Informational Text 8: Explain how an author uses relevant evidence to support particular points in a text, identifying textual features and evidence support (e.g., graphics).	Explain how the author uses evidence to support his/her claims.	4	CR	
Writing 1: Write an opinion piece on topics or texts, supporting a point of view with reasons and information.	Write an opinion piece with evidence.	5	CR, PT	CR, PT CR, PT
Write and/or Select Assessment Items				
Standard(s) (one per Skill)	Type(s) of Item	Level(s) of Rigor	# of Points	% of Assessment
TOTAL				

[illegible]

KEY CONCEPTS

Rigor

How to think like a Rigorist: How to move from the Page of Safety to the Page of Risk

How to also Work to Support on a Student's needed Rigor

How to Help You to be a Rigorist

How to Measure a Rigor or Intellectual Learning and Intellectual Growth

How to Use the Assessment Equipment

Higher-Order Thinking

1. Remembering
2. Understanding
3. Applying
4. Analyzing
5. Evaluating
6. Creating

Lower-Order Thinking

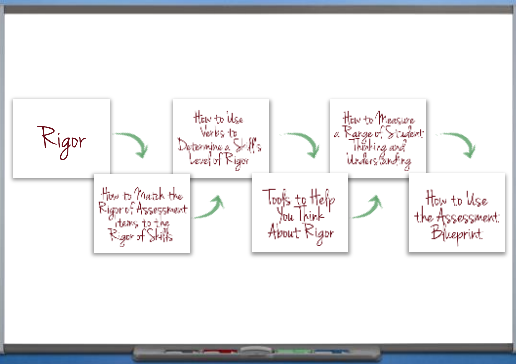
Remembering

Applying

Evaluating

Rigor

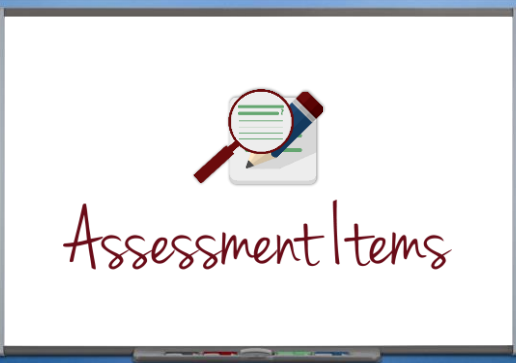
CHECK FOR UNDERSTANDING



CHECK FOR UNDERSTANDING

- ☒ Define what **RIGOR** means for the purpose of these modules
- ☒ Use the **VERBS** in standards, and other tools, to identify the **COGNITIVE COMPLEXITY** in standards
- ☒ Explain why assessments with an appropriate level of rigor also measure a **RANGE OF STUDENT THINKING AND UNDERSTANDING**
- ☒ Use the **ASSESSMENT BLUEPRINT** to document the level of rigor of each skill

CHECK FOR UNDERSTANDING



CHECK FOR UNDERSTANDING



Assessment Item

- Using Bloom's Taxonomy, identify the level or levels of rigor in this standard from Iowa. Remember to pay close attention to the verbs.

Understand the use of geographic tools to locate and analyze information about people, places, and environments.

1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create
Remember Information	Explain Ideas or Concepts	Use Information in a New Way	Distinguish Between Parts	Justify a Position or Decision	Create a New Product or Point of View

Source: Iowa Department of Education, "Iowa Core K-12 Social Studies" (2010).

CHECK FOR UNDERSTANDING



Assessment Item

- Using Bloom's Taxonomy, identify the level or levels of rigor in this standard from Iowa. Remember to pay close attention to the verbs.

Understand the use of geographic tools to locate and analyze information about people, places, and environments.

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Remember Information	Explain Ideas or Concepts	Use Information in a New Way	Distinguish Between Parts	Justify a Position or Decision	Create a New Product or Point of View



CHECK FOR UNDERSTANDING



Answer

- Using Bloom's Taxonomy, identify the level or levels of rigor in this standard from Iowa. Remember to pay close attention to the verbs.

Understand the use of geographic tools to locate and analyze information about people, places, and environments.

The key verbs in the skills in this standard are "use" and "analyze," which are associated with lower- and higher-order skills. "Understand" is a level 1 skill, and "analyze" is a level 4 skill.

CHECK FOR UNDERSTANDING



Assessment Item

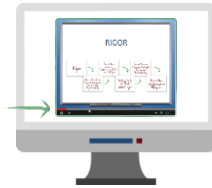
2. Explain in your own words why well-designed assessments should measure a range of student thinking and understanding.

CHECK FOR UNDERSTANDING



Assessment Item

2. Explain in your own words why well-designed assessments should measure a range of student thinking and understanding.



CHECK FOR UNDERSTANDING



Answer

2. Explain in your own words why well-designed assessments should measure a range of student thinking and understanding.

Well-designed assessments include items with various levels of rigor to ensure that they measure what all students know and can do. If assessments are too easy, some students may not have the opportunity to demonstrate the upper bounds of what they know and can do. I should include items in my assessment that challenge all of my students.

On the other hand, if assessments are too complex, some students may not be able to showcase their knowledge and skills at all. I can include items that require lower-level thinking to reveal where learning breaks down among students struggling to master a standard.

Rigor

