Creating Assessments for Student Success

Companion Document for the Video-Based Professional Development Series

Issued by the
South Carolina Department of Education

Mick Zais
State Superintendent of Education

2011

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This professional development program was made possible through a grant from the IES Teacher Quality Research Grant Program Award Number R305M050270B to the South Carolina Department of Education.

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Acknowledgements

We wish to express our gratitude to the many persons who contributed to the video and the companion document portions of this project. Dr. Theresa Siskind, former Deputy Superintendent of Accountability at the South Carolina Department of Education (SCDE), arranged the funding for the original project. Harriett Pritchard, in the Office of Assessment—along with Leslie Skinner, Judy Shillinglaw, Kathy Ortlund Linda Schoen-Giddings provided content area expertise. Dr. Dawn Mazzie assisted in the construction of the middle school cognitive level task. Tamra Paschal and the teachers at Rosewood Elementary allowed us to pilot tasks with their students, and Vincent Silva at Sedgefield Middle School did the same with his middle school students. Dr. Gayle Swanson, editor for the SCDE, assisted us in constructing both the text and the graphics for the first version of the companion document, and Lara Osleson and Kristina Wilson with CTB/McGraw-Hill assisted with formatting of this version.

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Introduction

In 1990, the American Federation of Teachers, the National Council on Measurement in Education, and the National Education Association jointly issued *Standards for Teacher Competence in Educational Assessment of Students,* a document that is now regarded as setting forth the national standards for teacher competence in student assessment. These national standards serve as the basis for the techniques covered in the professional development video series *Creating Assessments for Student Success.*

Teachers will choose assessment methods appropriate for instructional decisions.

1. Teachers will develop assessment methods appropriate for instructional decisions.
2. Teachers will administer, score, and interpret the results of both externally-produced and teacher-produced assessments.
3. Teachers will use assessment results when making decisions about individual students, planning instruction, or developing curriculum.
4. Teachers will use valid grading procedures based on student assessments.
5. Teachers will communicate assessment results to students, parents and other lay audiences, and educators. [The full text of the national standards is published online at http://www.unl.edu/buros/bimm/html/article3.html.

This document, *Creating Assessments for Student Success: Companion Document for the Video-Based Professional Development Series,* is designed to be used in conjunction with the video series *Creating Assessments for Student Success*. This updated series, formerly known as *Assessing Standards in the Classroom*, incorporates the most recent research in classroom assessment. The series examines the types of instructional changes teachers should implement if teachers are to use their assessments formatively. This professional development program fosters appropriate methods of formative and summative classroom assessment, correct interpretation of student test scores, and implementation of valid grading procedures. The program focuses on the development of standards-based assessments using research-based strategies by:

- suggesting areas of collaboration among teachers in the development and review of assessments,
- providing samples of student work for teachers to analyze,
- providing assessment samples for teachers to analyze,
- providing rubrics so that instructional facilitators can measure the quality of classroom assessments in current use, and
- providing examples of assessment alignment issues from the perspective of state measurement specialists.

Professional Development Course Syllabus:
Creating Assessments for Student Success

COURSE DESCRIPTION

This professional development series, which is designed for public school faculty members, focuses on the development of standards-based assessments to inform classroom instruction. In the course, teams of teachers will develop an understanding of the relationship among curriculum, instruction, and assessment. Teams will analyze different assessments and develop an understanding of the strengths and weaknesses of each assessment type. Teams will also analyze student work to develop an understanding of the strengths and weaknesses of student skills and develop instructional plans to move students toward meeting the goals in the state indicators.

GOALS AND OBJECTIVES

The professional development series seeks to produce educators who are able to

(a) explain the purposes and uses of assessment;

(b) align their assessments with the state standards and indicators;

(c) choose and construct assessments that are appropriate for guiding instructional decisions;

(d) use results from assessments to target instruction to individual student needs;

(e) apply the appropriate assessment-writing guidelines; and

(f) analyze the cognitive rigor of standards and assessments.

RECOMMENDED TEXT FOR TEACHERS

- *Put to the Test: Tools and Techniques for Classroom Assessment*, by Therese M. Kuhs, Robert Johnson, Susan Agruso, and Diane Monrad (Portsmouth, NH: Heinemann, 2001). Order at http://books.heinemann.com/products/E00278.aspx.
- *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*, edited by Lorin W. Anderson, David R. Krathwohl, Peter W. Airasian, Kathleen A. Cruikshank, Richard E. Mayer, Paul R. Pintrich, James Raths, Merlin C. Wittrock (New York, NY: Longman, 2001).
- *Handbook of Formative Assessment*, Edited by Heidi L. Andrade and Gregory J. Cizek (New York, NY: Routledge).

RECOMMENDED MATERIALS AND RESOURCES

- A hard copy of your current state standards document, which can be downloaded http://ed.sc.gov/agency/pr/standards-and-curriculum.
- A school or home computer with Internet access
- Your current state-adopted textbook
- *Put to the Test: Tools and Techniques for Classroom Assessment*
- *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*

RECOMMENDATIONS FOR SCHOOLS AND DISTRICTS

- The objective of the course is for teachers to develop assessments that are aligned with state standards and to create those assessments both independently and in collaboration with their peers in an environment that fosters professional dialogue. Schools or districts can facilitate achieving this objective by appointing a designated person who will organize the on-site professional development sessions. It is suggested that each school purchase *Handbook of Formative Assessment* as a teacher resource.

SEQUENCE OF CLASSES and ASSIGNMENTS

Week	Work Schedule	Time Allocated	Task Due
Week 1	Review of course syllabus	15 minutes	
	Video segment: "Overview of National, State, and Classroom Assessments"	37 minutes	
	Development of individual reflections (performance task 1)	45 minutes	
	Small-group sharing	30 minutes	
	Whole-group discussion	23 minutes	
	HOMEWORK ❑ **Read Kuhs et al., chapter 1** ❑ **Read Anderson & Krathwohl, chapter 1**	(2 hours)	
Week 2	**Video segment:** "Interpreting Cognitive Levels in the State Standards"	45 minutes	
	Cognitive-level practice	30 minutes	
	Cognitive-level answers	30 minutes	
	Video segment: "Math Strategies" "Reading Assessment" "Science Assessment Literacy" "Social Studies Assessment"	45 minutes	
	HOMEWORK ❑ **Read Anderson & Krathwohl, chapters 2 & 3**	(1 hour)	
Week 3	**Video segment:** "Determining the Best Type of Assessment Tool for an Indicator"	60 minutes	
	Group Performance Task 2	45 minutes	
	Presentation of Task 2	45 minutes	
	HOMEWORK ❑ **Read Anderson & Krathwohl, chapters 4 & 5**		
Week 4	**Video segment:** "Creating Standards-Based Performance Task"	35 minutes	
	Performance Task Attribute Analysis and Practice	55 minutes	
	Performance Task Attribute Rationale and Discussion	1 hour	
	HOMEWORK ❑ **Read Kuhs et al., chapter 3** ❑ **Develop individual task 3**	(2 hours)	
Week 5	**Video segment:** "Checklists"	30 minutes	**Task 3 due**
	Checklist Examples: Similarities and Differences	30 minutes	
	Group Checklist Development and Sharing	90 minutes	
	HOMEWORK ❑ **Read Kuhs et al., chapter 4** ❑ **Develop individual task 4**	(1 hour)	
Week 6	**Video segment:** "Developing Rubrics"	1 hour	**Task 4 due**
	Women's suffrage movement task	30 minutes	
	Content Area Development of a Task and Rubric	1 hour	
	HOMEWORK	2 hours	

	❑ **Develop individual task 5**		
Week 7	**Video segment:** "Self-Assessment"	45 minutes	**Task 5 due**
	Review of NAEP student writing samples	45 minutes	
	Revision of Sample 4	45 minutes	
	Discussion	15 minutes	
	HOMEWORK ❑ **Suggested: Read Andrade & Cizek, chapter 6**	(2 hours)	
Week 8	**Video segment:** "Scaffolded Formative Assessment"	70 minutes	
	Review of student responses	45 minutes	
	Instructional next steps	35 minutes	
	HOMEWORK ❑ **Develop individual task 6**	(2 hours)	
Week 9	**Video segment:** "Developing Multiple-Choice Items for Classroom Assessment"	1 hour	**Task 6 due**
	Investigating Multiple-Choice Items for Standards Alignment and Cognitive Levels	90 minutes	
	HOMEWORK ❑ **Read Kuhs et al., chapter 5**	(1 hour)	
Week 10	Group Item Development	90 minutes	
	Group Item Development Sharing	1 hour	
	HOMEWORK **Develop individual task 7**	3 hours	
Week 11	**Video segment:** "Planning Effective Feedback and Classroom Questioning"	30 minutes	**Task 7 due**
	Review and Improvement of Feedback Samples	30 minutes	
	Review of Commentary on Feedback Samples	30 minutes	
	Video segment: "Use and Interpretation of Test Scores"	30 minutes	
	HOMEWORK ❑ **Suggested: Read Andrade & Cizek, chapter 16** ❑ **Develop individual task 8**	(2 hours)	
Week 12	**Video segment:** "Portfolios"	30 minutes	**Task 8 due**
	Content Group Development and Sharing	60 minutes	
	Review Portfolio Task	30 minutes	
	HOMEWORK **Read Kuhs et al., chapter 6** ❑ **Develop Individual Performance Task 9**	(2 hours)	
Week 13	–	–	**Task 9 due**

Week 1
Current Assessment Practices

For the Facilitator

Prior to this session, request that participants bring grade books from either this school year or the last school year to the meeting. In addition, photocopy the following materials and make a packet for every teacher.

- *Professional Development Course Syllabus (pages 8-11)*
- *Matrix for Reflection on Current Assessment Practices (page 14)*

Distribute the packets before the teachers have viewed the first video segment, "Overview of Assessment." Before watching the video, review the course syllabus with the teachers.

After watching the video, ask participants to select one class from their grade book. For this class, participants will review the types of assessments used over the time span covered by one grading period. Participants will tally the types of assessments used on the *Matrix for Reflection on Current Assessment Practices* tally sheet.

Teachers will need approximately 45 minutes to tally assessments, complete the *Matrix for Reflection on Current Assessment Practices*, and answer the associated questions. At the end of this time, break into content-area groups to discuss findings. Related arts and physical education teachers should form a single group. Foreign language teachers should be able to work successfully with the English language arts (ELA) teachers. Ask each group to appoint a spokesperson. This person will record points or themes that are similar and different among group members. This phase should take approximately thirty minutes.

After each content group has developed a set of themes, reconvene as a whole group to share themes. That is, what conclusions did the groups come to after talking about past assessment practices? On an overhead projector (or dry erase board, chalk board, computer, etc.), begin writing and tallying the themes shared by each spokesperson. After reviewing the types of assessments, lead a group discussion using the following questions.

- Was a rationale provided for each type of assessment used? If a specific type of assessment was not used, explain why you never used this form of assessment.
- Were assessments used for a formative purpose or summative purpose? Do you feel that the chosen assessment was ideal? Explain your response.
- Are students given specific feedback? If so, is feedback provided through letter grades or written comments?
- Is there an area of assessment to be improved or studied further?
- What was learned in this session?

Oftentimes, teachers tend to gravitate toward one or two particular assessment formats without a strong rationale or because the district encourages a particular assessment format. However, this practice allows students to demonstrate knowledge and skills only in a one- or two-dimensional manner. The more varied the assessment formats, the more student abilities are captured. This helps the student grow in the understanding of the specific content. This point should be stressed.

In addition, many teachers use assessments in a summative way, such as an end-of-chapter test. What would it look like to use an assessment in a formative way? In a formative assessment, teachers provide students feedback on progress and teachers use the information to change and adapt instruction on the same topic prior to moving on to the next lesson. Learning to create high quality classroom assessments takes practice. Learning to create high quality assessments and to use them for formative purposes takes even more practice and time; however, initial research is showing the following:

- Teachers in this course increase assessment skills.
- Formative practices can raise student achievement when repeatedly enacted.
- On average, repeatedly enacted means students are given around 12 different occasions to practice a single skill.

Matrix for Current Assessment Practices

You will have 45 minutes to complete this matrix. With reference to one grading period, record the assessment type used by answering the question in the heading of each of the three columns of the matrix. If you used a combination of assessment types within a single test, record the use of each type individually.

Assessment Type	**How often did you use this assessment type in one 9-week period?**	**What is your rationale for using or not using this assessment type?**	**Do you use this assessment type in a formative or summative way? How?**
Constructed response with scoring guide			
Constructed response without scoring guide			
Essay with scoring guide			
Essay without scoring guide			
Fill in the blank			
Homework			
Interviews			
Journal with scoring guide			
Journal without scoring guide			
Matching			
Multiple choice			
Observations			
Questioning			
True and False			
Portfolio			
Student Self-Assessment			

Week 2
Cognitive Levels

For the Facilitator

Prior to this session, photocopy the following materials that are applicable for your school and make a packet for every teacher.

- *Cognitive Level Practice*
- *PowerPoint presentation for module*

After the teachers have viewed the video segment "Interpreting Cognitive Levels in the State Standards," distribute the packets and have them spend about thirty minutes individually analyzing and answering the questions on the "Cognitive Level Practice" sheet. Following the thirty minutes, lead a discussion about these questions. Use the answers provided as a guide.

Next, have teachers divide into content groups. Have the content area teams view the relevant video segment for their content area. There are four videos which provide an overview for assessment and instructional issues particular to the content area. These are very important foundations for interpreting the standards for instruction and assessment:

- Math Strategies (39 Minutes)
- Reading Assessment (44 Minutes)
- Science Assessment Literacy (51 Minutes)
- Social Studies Assessment (32 Minutes)

Cognitive Level Practice:
Elementary Rationale

Use the following social studies indicator and constructed-response item to answer questions 1 and 2.

4-5.2 Explain the motives for the exploration in the West and the push for westward expansion, including the concept of manifest destiny, economic opportunities in trade, and the availability of rich land.

Describe why the people we call "pioneers" moved west across the United States.

1. At what cognitive level does the question **most** engage the student?

   A. Analyze
   B. Apply
   C. Create
   D. Understand

2. Which example **best** describes a student's application of a new grammar rule?

   A. Discussing the grammar concept with a fellow student
   B. Identifying when the grammar concept is used in error
   C. Using the grammar concept in a poem
   D. Writing the rules about when to use the grammar concept

Use the following mathematics indicator constructed-response item to answer question 3.

4-4.6 Represent points, lines, line segments, rays, angles, and polygons.

Draw an obtuse angle.

3. Which cognitive level from Anderson and Krathwohl's (eds) *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* does the mathematics indicator require?

   A. Analyze
   B. Apply
   C. Create
   D. Understand

Use the ELA indicator to answer question 4.

NOTE: Hereafter, Anderson and Krathwohl's text, *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*, will be referred to as "revised Bloom's."

5-1.5 Interpret the effect of the author's craft (for example, tone, figurative language, dialogue, and imagery) on the meaning of literary texts.

4. Which cognitive level from revised Bloom's does the ELA indicator require?

   A. Analyze
   B. Apply
   C. Create
   D. Understand

Read the following story, then answer question 5.

HOW THE BRAZILIAN BEETLES GOT THEIR COATS

RETOLD BY ELSIE EELLS

In Brazil, the beetles have such beautifully colored, hard-shelled coats upon their backs that they are sometimes set in pins and necklaces like precious stones. Once upon a time, years and years ago, they had ordinary plain brown coats. This is how it happened that the Brazilian beetle earned a new coat.

One day a little brown beetle was crawling along a wall when a big gray rat ran out of a hole in the wall and looked down scornfully at the little beetle. “O ho!” he said to the beetle, “how slowly you crawl along. You’ll never get anywhere in the world. Just look at me and see how fast I can run.”

The big gray rat ran to the end of the wall, wheeled around, and came back to the place where the little beetle was slowly crawling along at only a tiny distance from where the rat had left her.

“Don’t you wish that you could run like that?” said the big gray rat to the little brown beetle.

“You are surely a fast runner,” replied the little brown beetle politely. Her mother had taught her always to be polite and had often said to her that a really polite beetle never boasts about her own accomplishments. The little brown beetle never boasted a single boast about the things she could do. She just went on slowly crawling along the wall.

A bright green and gold parrot in the mango tree over the wall had heard the conversation. “How would you like to race with the beetle?” he asked the big gray rat. “I live next door to the tailor bird,” he added, “and just to make the race exciting I’ll offer a brightly colored coat as a prize to the one who wins the race. You may choose for it any color you like and I’ll have it made to order.”

“I’d like a yellow coat with stripes like the tiger’s,” said the big gray rat, looking over his shoulder at his gaunt gray sides as if he were already admiring his new coat.

“I’d like a beautiful, brightly colored new coat, too,” said the little brown beetle.

The big gray rat laughed long and loud until his gaunt gray sides were shaking. “Why, you talk just as if you thought you had a chance to win the race,” he said, when he could speak.

The bright green and gold parrot set the royal palm tree at the top of the cliff as the goal of the race. He gave the signal to start and then he flew away to the royal palm tree to watch for the end of the race.

The big gray rat ran as fast as he could. Then he thought how very tired he was getting. “What’s the use of hurrying?” he said to himself. “The little brown beetle cannot possibly win. If I were racing with somebody who could really run it would be very different.” Then he started to run more slowly, but every time his heart beat it said, “Hurry up! Hurry up!” The big gray rat decided that it was best to obey the little voice in his heart so he hurried just as fast as he could.

When he reached the royal palm tree at the top of the cliff he could hardly believe his eyes. He thought he must be having a bad dream. There was the little brown beetle sitting quietly beside the bright green and gold parrot. The big gray rat had never been so surprised in all his life. “How did you ever manage to run fast enough to get here so soon?” he asked the little brown beetle as soon as he could catch his breath.

The little brown beetle drew out the tiny wings from her sides. “Nobody said anything about having to run to win the race,” she replied, “so I flew instead.”

“I did not know that you could fly,” said the big gray rat in a subdued little voice.

“After this,” said the bright green and gold parrot, “never judge anyone by his looks alone. You never can tell how often or where you may find concealed wings. You have lost the prize.”

Then the parrot turned to the little brown beetle who was waiting quietly at his side. “What color do you want your new coat to be?” he asked.

The little brown beetle looked up at the bright green and gold parrot, at the green and gold palm trees above their heads, at the green mangoes with golden flushes on their cheeks lying on the ground under the mango trees, at the golden sunshine upon the distant green hills. “I choose a coat of green and gold,” she said.

From that day to this the Brazilian beetle has worn a coat of green with golden lights upon it.

And until this day, even in Brazil, where the flowers and birds and beasts and insects have such gorgeous coloring, the rat wears a dull gray coat.

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Use the indicator and multiple-choice item to answer question 5.

4-1.2 Analyze literary texts to draw conclusions and make inferences.

The beetle chooses green and gold for the colors of her coat because they are A. unusual colors. B. her favorite colors. C. the colors the rat wanted. D. the colors of the world.

5. Which statement best aligns the question with the indicator?

   A. The question is at a lower cognitive level than the indicator.
   B. The question is at the correct cognitive level indicator.
   C. The question is at a higher cognitive level than the indicator.
   D. The question is not aligned to the indicator.

Study the social studies indicator, and write an answer to question 6.

3-4.1 Outline the course of the Civil War and South Carolina's role in significant events, including the secession convention, the firing on Fort Sumter, the Union blockade of Charleston, and Sherman's march through South Carolina.

6. What is the cognitive level of the indicator? What is the rationale for the classification?

Study both the science indicator and the sample item before answering question 7.

4-4.6 Predict weather from data collected through observation and measurements.

It is a cloudless, sunny day. A student measures the temperature of the air outside every hour. She collects the following data.

Time	Air Temperature
8:00 A.M.	18C
9:00 A.M.	19C
10:00 A.M.	21C
11:00 A.M.	23C

What will the air temperature outside most likely be at 12:00 noon?

1. 18 degrees C
2. 21 degrees C
3. 25 degrees C
4. 32 degrees C

7. How is this question aligned to the cognitive level of the indicator? What evidence can you provide to support your conclusion?

Use the ELA indicator and the performance task to answer question 8.

5-2.3 Analyze a given text to detect author bias (for example, unsupported opinions).

Performance Task

We have been studying author bias. Read this article from our school newspaper entitled "We Need More Recess." Using the guidelines that we have used in class, determine if the author has a bias. Write an essay that supports your findings. Your grade will be based on use of complete sentences and correct grammatical conventions.

How are the grading criteria aligned to the content and cognitive level of the indicator? What evidence can you provide to support your conclusion?

8. Which indicator **does not** imply the cognitive level of understand?

   A. Compare decimals through hundredths by using the terms less than, is greater than, and is equal to and the symbols <, >, and =.
   B. Explain the effect of the product when one of the factors is changed.
   C. Generate strategies to divide whole numbers by single digit divisors.

D. Represent improper fractions, mixed numbers, and decimals.

Cognitive Level Practice:
Elementary Office of Assessment Rationale

Use the social studies indicator and constructed-response item to answer questions 1 and 2.

4-5.2 Explain the motives for the exploration in the West and the push for westward expansion, including the concept of manifest destiny, economic opportunities in trade, and the availability of rich land.

Describe why the people we call "pioneers" moved west across the United States.

1. At what cognitive level does the question **most** engage the student?

   A. Analyze
   B. Apply
   C. Create
   D. Understand (correct)

Rationale: Students must provide reasons, in their own words, regarding why pioneers moved west. To answer the question, students are retrieving information from long-term memory. Students are summarizing information learned from text, research, teacher lectures, or a combination of sources. Therefore, the question is at the **understand** level in Anderson and Krathwohl's (eds) *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives.* Interested readers should refer to page 75 in the text.

2. Which example **best** describes a student's application of a new grammar rule?

   A. Discussing the grammar concept with a fellow student
   B. Identifying when the grammar concept is used in error
   C. Using the grammar concept in a poem (correct)
   D. Writing the rules about when to use the grammar concept

Rationale: The correct answer is **applying.** When students write a poem using a newly learned grammar rule, they are implementing the grammar rule in a new situation. To identify a grammar concept used in error, the student must **analyze** the structure of the sentence. If students are asked to write the rules about the use of the grammar concept, the question would be classified at the **remember** level in the revised Bloom's. Interested readers should refer to page 78 of this text.

Use the following mathematics indicator constructed-response item, to answer question 3.

4-4.6 Represent points, lines, line segments, rays, angles, and polygons

Draw an obtuse angle.

3. Which cognitive level from revised Bloom's does the mathematics indicator require?

   A. Analyze
   B. Apply
   C. Create
   D. Understand (correct)

Rationale: In order to accurately answer this question, the student must know the mathematics terminology and must visualize an obtuse angle. The student is translating words to a picture by providing an illustration. An illustration is classified at the cognitive level of **understand** according to revised Bloom's. Interested readers should refer to pages 70 and 71 in this text.

Use the ELA indicator to answer question 4.

5-1.5 Interpret the effect of the author's craft (for example, tone, figurative language, dialogue, and imagery) on the meaning of literary texts.

4. Which cognitive level from revised Bloom's does the ELA indicator require?

   A. Analyze
   B. Apply
   C. Create
   D. Understand (correct)

Rationale: In order to interpret the effect of the author's craft, the student must connect why and how the author's craft affects the meaning of the text. To make this connection, the student, for example, explains why the author is using particular words to create a particular tone. Then, the student connects the tone to what is happening in the text. Interested readers should refer to page 70 in revised Bloom's.

Read the following story and the ELA indicators to answer question 5.

HOW THE BRAZILIAN BEETLES GOT THEIR COATS

RETOLD BY ELSIE EELLS

(text in teacher copy)

Use the indicator and the multiple-choice item to answer question 5.

4-1.2 Analyze literary texts to draw conclusions and make inferences.

The beetle chooses green and gold for the colors of her coat because they are

A. unusual colors.
B. her favorite colors.
C. the colors the rat wanted.
D. the colors of the world.

5. Which statement best aligns the question with the indicator?

A. The question is at a lower cognitive level than the indicator.
B. The question is at the correct cognitive level indicator. (Correct)
C. The question is at a higher cognitive level than the indicator.
D. The question is not aligned to the indicator.

Rationale: In this example, in order to make the correct inference, students must be able to **analyze** the selection in order to distinguish relevant from irrelevant details. As addressed in revised Bloom's, inferring intention is a component of analyze. In this item, the student must use clues (the colors of the parrot, trees, etc.,) to "read between the lines," which is the expectation of the indicator.

Read the indicator below to answer question 6.

3-4.1 Outline the course of the Civil War and South Carolina's role in significant events, including the secession convention, the firing on Fort Sumter, the Union blockade of Charleston, and Sherman's march through South Carolina.

6. What is the cognitive level of the indicator? What is the rationale for the classification?

Study both the science indicator and the question, then answer question 7.

Rationale: The students must be able to recall the course of the Civil War from long-term memory and remember how South Carolina was involved in key events listed in the indicator. When students write the information in their own words, they are explaining and describing. This is at the **understand** level in revised Bloom's.

4-4.6 Predict weather from data collected through observation and measurements

It is a cloudless, sunny day. A student measures the temperature of the air outside every hour. She collects the following data.

Time	Air Temperature
8:00 A.M.	18C
9:00 A.M.	19C
10:00 A.M.	21C
11:00 A.M.	23C

What will the air temperature outside most likely be at 12:00 noon?

1. 18 degrees C
2. 21 degrees C
3. 25 degrees C
4. 32 degrees C

7. How is this question aligned to the cognitive level of the indicator? What evidence can you provide to support your conclusion?

Rationale: The question is at the same cognitive level as the indicator. Based on the data trend in the table, students are able to predict the next data point. In the PowerPoint presentation on the video, a slide noted that inferring is defined as "finding a pattern within a series of examples or instances." This is classified as understand.

Study both the ELA indicator and the performance task to answer question 8.

5-2.3 Analyze a given text to detect author bias (for example, unsupported opinions).

Performance Task

We have been studying author's bias. Read this article from our school newspaper entitled, "We Need More Recess." Using the guidelines that we have used in class, determine if the author has a bias. Write an essay that supports your findings. Your grade will be based upon your use of complete sentences and correct grammatical conventions.

How are the grading criteria aligned to the content and cognitive level of the indicator? What evidence can you provide to support your conclusion?

Rationale: The grading criteria are not aligned with the indicator. The task, however, is aligned with the indicator. The indicator is asking the students to detect an author's bias. Students are being graded based upon their use (implementation) of complete sentences and correct grammatical conventions. The indicator focuses on a student's ability to analyze an unfamiliar piece of text for potential author bias.

8. Which indicator **does not** imply the cognitive level of understand?
   A. Compare decimals through hundredths by using the terms less than, is greater than, and is equal to and the symbols <, >, and =.
   B. Explain the effect of the product when one of the factors is changed.
   C. Generate strategies to divide whole numbers by single digit divisors. (correct)
   D. Represent improper fractions, mixed numbers, and decimals.

Rationale: If students are required to generate strategies for an unfamiliar (new) mathematics problem, they must be able to analyze the task and then create procedures or strategies to show and implement division. This is at the **create** level in revised *Bloom's.*

Note: To ensure understanding, encourage students to develop more than one possible solution for this problem.

Cognitive Level Practice:
Middle School

1. Which of these standards is **not** at the cognitive level of *understand*?

   A. Compare the incentives of the various European countries to explore and settle new lands.
   B. Explain the significance of humanism and the revival of classical learning in daily life during the Renaissance, including the effect of humanism on education, art, religion, and government.
   C. Identify the key figures of the Renaissance and the Reformation and their contributions, including Leonardo da Vinci, Michelangelo, Johannes Gutenberg, John Calvin, and Martin Luther.
   D. Summarize the characteristics of the Islamic civilization and the geographic aspects of its expansion.

2. Which example **best** describes a student's application of a new grammar concept?

   A. Discussing the grammar concept with a fellow student
   B. Identifying when the grammar concept is used in error
   C. Using the grammar concept in a poem
   D. Writing the rules about when to use the grammar concept

3. Which standard does **not** imply the cognitive level of *understand*?

   A. Use inverse operations to solve one-step equations that have whole-number solutions and variables with whole-number coefficients.
   B. Represent algebraic relationships with variables in expressions, simple equations, and simple inequalities.
   C. Explain how transformations affect the location of the original polygon in the coordinate plane.
   D. Classify shapes as similar.

Read the poem to answer question 4.

Alligator Poem
by Mary Oliver

I knelt down
at the edge of the water,
and if the white birds standing
in the tops of the trees whistled any warning
I didn't understand,
I drank up to the very moment it came
crashing toward me,
its tail flailing
like a bundle of swords,
slashing the grass,
and the inside of its cradle-shaped mouth
gaping,
and rimmed with teeth—
and that's how I almost died
of foolishness
in beautiful Florida.
But I didn't.
I leaped aside, and fell,
and it streamed past me, crushing everything in its path
as it swept down to the water
and threw itself in,
and, in the end,
this isn't a poem about foolishness
but about how I rose from the ground
and saw the world as if for the second time,
the way it really is.
The water, that circle of shattered glass,
healed itself with a slow whisper
and lay back
with the back-lit light of polished steel,
and the birds, in the endless waterfalls of the trees,
shook open the snowy pleats of their wings, and drifted away
while, for a keepsake, and to steady myself,
I reached out,
I picked the wild flowers from the grass around me—
blue stars
and blood-red trumpets
on long green stems—
for hours in my trembling hands they glittered
like fire.

From New and Selected Poems: Volume One by Mary Oliver. Copyright © 1992 by Mary Oliver. Reprinted by permission of Beacon Press, Boston. Retrieved using the National Assessment of Educational Progress (NAEP) questions tool available at the following Web address: http://www.nces.ed.gov/nationsreportcard/itmrlsx/landing.aspx

Use the indicator and constructed-response item to answer question 4.

8-1.5 Analyze the effect of the **author's craft** (including **tone** and the use of **imagery**, **flashback**, **foreshadowing**, **symbolism**, **irony**, and **allusion**) on the meaning of literary **texts**.

The following lines are from the poem:

I drank up to the very moment it came
crashing toward me,
its tail flailing
like a bundle of swords,
slashing the grass,
and the inside of its cradle-shaped mouth
gaping,
and rimmed with teeth—

Why does the author use figurative language to set up imagery in these lines? Why is imagery important to understanding the poem?

4. Which statement best aligns the question with the indicator?

   A. The question is at a lower cognitive level than the indicator.
   B. The question is at the same cognitive level as the indicator.
   C. The question is at a higher cognitive level than the indicator.
   D. The question is not aligned to the indicator.

Study the ELA standard.

6-2.6 Interpret information from graphic features such as illustrations, graphs, charts, maps, diagrams, and graphic organizers.

5. Which level of Bloom's taxonomy does the ELA standard imply?

   A. Understand
   B. Apply
   C. Analyze
   D. Evaluate

Use the indicator, text, and question to answer question 6.

5-1.6 Analyze the details that support the expression of the main idea in a given literary text.

…Reading or needlework was done by candlelight, or by the light of the fire. During the winter, animal skins sealed the drafty windows of some cabins and blocked out the daylight. The living area inside was gloomy, except in the circle of light at the hearth.

Early Americans did not bathe as often as we do. When they did, their "bathroom" was the kitchen, in that toasty space by the hearth. They partially filled a tub with cold water, then warmed it up with water heated in the fireplace. A blanket draped from chairs for privacy also let the fire's warmth surround the bather.

The household cooks spent hours at the hearth. They stirred the kettle of corn pudding or checked the baking bread while the rest of the family carried on their own fireside activities. So you can see why the fireplace was the center of a colonial home…

"A Brick to Cuddle Up To" by Barbara Cole, illustrated by Katharine Dodge, from *Highlights for Children*, Dec. 1991, copyright (c) Highlights for Children, Inc., Columbus, Ohio. Used by permission.

Question: What reasons does the author give in explaining why the hearth was the center of the home in colonial times?

6. Which statement is true regarding the alignment of the question with the standard?

   A. The question is at a lower cognitive level than the standard.
   B. The question is at the same cognitive level as the standard.
   C. The question is at a higher cognitive level than the standard.
   D. The question is not aligned with the standard.

Use the following indicator and constructed-response item to answer question 7.

8-4.5 Explain how the tilt of Earth's axis affects the length of the day and the amount of heating on Earth's surface, thus causing the seasons of the year.

Constructed-Response Item: How does the tilt of the Earth's axis as it revolves around the sun result in the seasons of the year?

7. Is this question aligned to the cognitive level of the indicator? What evidence can you provide to support your conclusion?

Use the following indicator and constructed-response item to answer question 8.

8-6.5 Explain the effect of the Great Depression and the lasting impact of New Deal programs on South Carolina, including the Rural Electrification Act, the Civilian Conservation Corps, Works Progress Administration, Public Works Administration building projects, the Social Security Act, and the Santee Cooper electricity project.

Constructed-Response Item: In a brief essay, explain how New Deal programs affected South Carolina. Be sure to include the effect of various acts and projects. Your grade will be based on (a) identifying and explaining relevant acts and details of the specific programs, and (b) describing how these programs affected South Carolina.

8. Which statement is true regarding the alignment of the question with the standard?

   A. The question is at a lower cognitive level than the standard.
   B. The question is at the same cognitive level as the standard.
   C. The question is at a higher cognitive level than the standard.
   D. The question is not aligned with the standard.

Use the following indicator and constructed-response item to answer question 9.

7-2.1 **Summarize** the ideas of the Enlightenment that influenced democratic thought and social institutions throughout the world, including the political philosophies of John Locke, Jean-Jacques Rousseau, and Baron de Montesquieu.

Research and then write a short biography (3 or 4 pages) on John Locke, Jean-Jacques Rousseau, or Baron de Montesquieu. In your biography, explain how your subject's political philosophies influenced the ideas of Enlightenment.

9. Are the above indicator and the constructed-response item at the same cognitive level? Give details to support your answer.

Cognitive Level Practice:
Middle School Rationale

1. Which of these standards is **not** at the cognitive level of *understand*?

   A. Compare the incentives of the various European countries to explore and settle new lands. (*understand*)
   B. Explain the significance of humanism and the revival of classical learning in daily life during the Renaissance, including the effect of humanism on education, art, religion, and government. (*understand*)
   C. Identify the key figures of the Renaissance and the Reformation and their contributions, including Leonardo da Vinci, Michelangelo, Johannes Gutenberg, John Calvin, and Martin Luther. (*remember*) (correct)
   D. Summarize the characteristics of the Islamic civilization and the geographic aspects of its expansion. (*understand*)

Rationale: When students identify key figures or identify contributions, as option C requires, students are retrieving information from long-term memory. They are not putting facts into their own words, which is necessary in order to demonstrate understanding of concepts. The verbs "explain" and "summarize" are often used to denote the understand level of thinking. The verb "compare" also indicates the understand level of thinking because students are describing similarities and differences.

2. Which example **best** describes a student's application of a new grammar concept?

   A. Discussing the grammar concept with a fellow student (*understand*)
   B. Identifying when the grammar concept is used in error (*analyze*)
   C. Using the grammar concept in a poem (*apply*) (correct)
   D. Writing the rules about when to use the grammar concept (*understand*)

Rationale: The correct answer is **applying.** When students write a poem using a newly learned grammar rule, they are applying the grammar rule to a new situation. To identify a grammar concept used in error, they must **analyze** the structure of the sentence. If students are asked to write the rules about the use of the grammar concept, this would be defined at the **remember** level in revised Bloom's. Interested readers should refer to page 78 of this text.

3. Which standard does not imply the cognitive level of understand?

   A. Use inverse operations to solve one-step equations that have whole-number solutions and variables with whole-number coefficients. *(apply*) (correct)
   B. Represent algebraic relationships with variables in expressions, simple equations, and simple inequalities. (*understand*)
   C. Explain how transformations affect the location of the original polygon in the coordinate plane. (*understand*)
   D. Classify shapes as similar. (*understand*)

Rationale: When students use a concept in a new situation, they are demonstrating that they are able to apply that concept. Representing, explaining, and classifying all demonstrate that the student understands the concept.

Read the poem to answer question 4.

Alligator Poem

by Mary Oliver

I knelt down
at the edge of the water,
and if the white birds standing
in the tops of the trees whistled any warning
I didn't understand,
I drank up to the very moment it came
crashing toward me,
its tail flailing
like a bundle of swords,
slashing the grass,
and the inside of its cradle-shaped mouth
gaping,
and rimmed with teeth—
and that's how I almost died
of foolishness
in beautiful Florida.
But I didn't.
I leaped aside, and fell,
and it streamed past me, crushing everything in its path
as it swept down to the water
and threw itself in,
and, in the end,
this isn't a poem about foolishness
but about how I rose from the ground
and saw the world as if for the second time,
the way it really is.
The water, that circle of shattered glass,
healed itself with a slow whisper
and lay back
with the back-lit light of polished steel,
and the birds, in the endless waterfalls of the trees,
shook open the snowy pleats of their wings, and drifted away
while, for a keepsake, and to steady myself,
I reached out,
I picked the wild flowers from the grass around me—
blue stars
and blood-red trumpets
on long green stems—
for hours in my trembling hands they glittered
like fire.

From New and Selected Poems: Volume One by Mary Oliver. Copyright © 1992 by Mary Oliver. Reprinted by permission of Beacon Press, Boston. Retrieved using the National Assessment of Educational Progress (NAEP) questions tool available at the following Web address: http://www.nces.ed.gov/nationsreportcard/itmrlsx/landing.aspx

Use the indicator and constructed-response item to answer question 4.

8-1.5 Analyze the effect of the **author's craft** (including **tone** and the use of **imagery**, **flashback**, **foreshadowing**, **symbolism**, **irony**, and **allusion**) on the meaning of literary **texts**.

The following lines are from the poem:

I drank up to the very moment it came
crashing toward me,
its tail flailing
like a bundle of swords,
slashing the grass,
and the inside of its cradle-shaped mouth
gaping,
and rimmed with teeth—

Why does the author use figurative language to set up imagery in these poem lines, and why is imagery important to understanding the poem?

4. Which statement best aligns the question with the indicator?

   A. The question is at a lower cognitive level than the indicator.
   B. The question is at the same cognitive level as the indicator.
   C. The question is at a higher cognitive level than the indicator.
   D. The question is not aligned to the indicator.

Rationale: The question is at the same cognitive level as the indicator. To interpret the effect of the author's craft, the student must connect that the author is using a simile (comparing the tail to a sword) and personification (slashing the grass) to provide the mental image of how terrifying the alligator appeared to the narrator. In revised Bloom's, if a student is making an inference about the author's intention, the verb attributing (a component of **analyze)** is used**.** In this item, the student must "read between the lines." The student must make the connection that the narrator looks at nature in a new way after believing he was almost attacked by the alligator.

Study the ELA standard.

6-2.6 Interpret information from graphic features such as illustrations, graphs, charts, maps, diagrams, and graphic organizers.

5. Which level of revised Bloom's taxonomy does the ELA standard require?

   A. Understand (correct)
   B. Apply
   C. Analyze
   D. Evaluate

Rationale: When students interpret information, according to revised Bloom's, they convert information from one representational form to another. In viewing graphs, charts, maps etc., students are oftentimes looking at a visual display of data or ideas. This is classified as **understand**. Interested readers can reference page 70 in the text.

Use the indicator, text, and multiple-choice item to answer question 6.

5-1.6 Analyze the details that support the expression of the main idea in a given literary text.

…Reading or needlework was done by candlelight, or by the light of the fire. During the winter, animal skins sealed the drafty windows of some cabins and blocked out the daylight. The living area inside was gloomy, except in the circle of light at the hearth.

Early Americans did not bathe as often as we do. When they did, their "bathroom" was the kitchen, in that toasty space by the hearth. They partially filled a tub with cold water, then warmed it up with water heated in the fireplace. A blanket draped from chairs for privacy also let the fire's warmth surround the bather.

The household cooks spent hours at the hearth. They stirred the kettle of corn pudding or checked the baking bread while the rest of the family carried on their own fireside activities. So you can see why the fireplace was the center of a colonial home…

"A Brick to Cuddle Up To" by Barbara Cole, illustrated by Katharine Dodge, from *Highlights for Children*, Dec. 1991, copyright (c) Highlights for Children, Inc., Columbus, Ohio. Used by permission.

Question: What reasons does the author give in explaining why the hearth was the center of the home in colonial times?

6. Which statement is true regarding the alignment of the question with the standard?

   A. The question is at a lower cognitive level than the standard. (correct)
   B. The question is at the same cognitive level as the standard.
   C. The question is at a higher cognitive level than the standard.
   D. The question is not aligned with the standard.

Rationale: The text explicitly states the reasons the hearth is the center of the home. This question is at a lower cognitive level than the indicator implies because students do not have to "read between the lines" to make an inference. On the other hand, if the text implied the reasons without explicitly stating them, the students would have to analyze the text to find them.

Use the following indicator and constructed-response item to answer question 7.

8-4.5 Explain how the tilt of Earth's axis affects the length of the day and the amount of heating on Earth's surface, thus causing the seasons of the year.

Constructed-Response Item: How does the tilt of the Earth's axis as it revolves around the sun result in the seasons of the year?

7. Is this question aligned to the cognitive level of the indicator? What evidence can you provide to support your conclusion?

Rationale: This question and the indicator are at the same cognitive level— **understand**. In their description, students should explain how the tilt of the Earth and the rotations of the Earth result in the seasons of the year.

Use the following indicator and constructed-response item to answer question 8.

8-6.5 Explain the effect of the Great Depression and the lasting impact of New Deal programs on South Carolina, including the Rural Electrification Act, the Civilian Conservation Corps, Works Progress Administration, Public Works Administration building projects, the Social Security Act, and the Santee Cooper electricity project.

Constructed-Response Item: In a brief essay, explain how the New Deal programs affected South Carolina. Be sure to include the effect of various acts and projects. Your grade will be based on (a) identifying and explaining relevant acts and details of the specific programs, and (b) describing how the programs affected South Carolina.

8. Which statement is true regarding the alignment of the question with the standard?

   A. The question is at a lower cognitive level than the standard.
   B. The question is at the same cognitive level as the standard. (correct)
   C. The question is at a higher cognitive level than the standard.
   D. The question is not aligned with the standard.

Rationale: The student will give descriptions of the programs and tell how the program affected South Carolina. Students are organizing and explaining information from long-term memory. This question and the indicator are at the same cognitive level—*understand*.

Use the following indicator and constructed-response item to answer question 9.

7-2.1 Summarize the ideas of the Enlightenment that influenced democratic thought and social institutions throughout the world, including the political philosophies of John Locke, Jean-Jacques Rousseau, and Baron de Montesquieu.

Research and then write a short biography (3 or 4 pages) on John Locke, Jean-Jacques Rousseau, or Baron de Montesquieu. In your biography, include how his political philosophies influenced the ideas of Enlightenment.

9. Are the indicator and the constructed-response item at the same cognitive level? Give details to support your answer.

Rationale: This item is **not aligned** to the indicator's intent. The indicator implies that students know the philosophies of three specific persons and can summarize the ideas of the Enlightenment that influenced democratic thought and social institutions throughout the world **using long-term memory.** The task asks students to include the relevant information on one of the three persons based upon research findings. Although the task will help students transfer the information into long-term memory, the task does not support measuring what a student has learned. We do not know what the student remembers without the support of research notes. If the teacher were to ask the student to explain how the political philosophies of John Locke (or Jean-Jacques Rousseau, or Baron de Montesquieu) influenced the ideas of Enlightenment with no other supports, then the task would be aligned to a portion of the indicator in content and cognitive level. Because social studies indicators are dense, multiple questions targeting different pieces of the indicator need to be developed and answered in order to measure the student's knowledge of the entire indicator.

Determining the Best Type of Assessment Tool for an Indicator

For the Facilitator

Prior to this session, photocopy the following materials and make a packet for every teacher

- *PowerPoint presentation for module*
- *Group Performance Task 2*
- *Rubric for Group Performance Task 2*
- *Model for Group Performance Task 2*

After the teachers have viewed the video segment "Determining the Best Type of Assessment Tool for an Indicator," distribute the above packets. Have them divide into content area groups. Review the directions for *Group Performance Task 2: The Best Assessment Tool for Your Measurable Objectives* and the *Model for Group Performance Task 2* (Use an LCD projector, an overhead, document reader or such device to view the documents.) The groups should complete *Group Performance Task 2*. They should work for roughly 45 minutes to complete the task, using appropriate technology to record their responses.

Each content group should present the results to the group as a whole. These presentations should take about 30 minutes. Teachers in content areas other than the particular area being presented should be encouraged to voice their agreement or disagreement with the cognitive-level identifications and rationales, using the rubric for the group performance task as a guide. If differing opinions arise, lead a discussion in which the various teachers explain their interpretations.

Group Performance Task 2:
Determining the Best Type of Assessment Tool for an Indictor

- ☐ Choose a single South Carolina indicator. Write the grade level, the number, and the text.
- ☐ Should the indicator be deconstructed into smaller pieces? If so, deconstruct the indictor.
- ☐ Use revised Bloom's taxonomy to identify the correct cognitive level(s) of the indicator. Justify your answer.
- ☐ Determine which assessment tool is most appropriate for the indicator(s). Justify your choice with specific attributes of that assessment format or the indicator.
- ☐ Show how the indicator could be assessed.

Remember: Developing multiple-choice items work well for the cognitive levels of remember, understand, apply, analyze, and evaluate. However, developing multiple-choice items that work well for the create level is more difficult.

Checklists and rubrics work well for short-answer questions, essays, and projects that combine several levels of thinking. Checklists and rubrics can be used to target remember, understand, apply, analyze, create, and evaluate levels. Scoring guides (i.e., checklists and rubrics) are particularly helpful when you want to assess the process involved in accomplishing a task. Checklists allow you to document if a skill was present or not present, and rubrics allow you to define and measure the varying levels of proficiency of a skill. Sometimes you will see rubrics in which errors are counted. These are not actually rubrics. Rather, the creator has formatted a checklist to look like a rubric.

Rubric for Group Performance Task 2:
The Best Assessment Tool for Your Measurable Objectives

Name: _____

Criteria	**Scale**				**Score**
	0	**1**	**2**	**3**	
Indicator	Indicator(s) not stated	Indicator(s) not accurately written or missing grade level, content area, corresponding number or text	Indicator(s) accurately written including grade level, content area, corresponding number and text		
Identification of cognitive skills	Cognitive skills not identified or described inaccurately	The identified cognitive skills are less rigorous than the indicator or no justification provided	The identified cognitive skills are equally as rigorous as the indicator but the justification provided is unclear or inaccurate	The identified cognitive skills are equally as rigorous as the indicator and justification provided is clear and accurate	
Justification of assessment tool	Not stated	Vague linkage between the student knowledge being assessed and the specific attributes of the assessment tool	Clear linkage between the student knowledge being assessed and the specific attributes of the assessment tool		

Model for Group Performance Task 2:
Elementary School Example

☐ Choose a single South Carolina indicator. Write the grade level, the number, and the text.

Grade 5 Science
5-2.3 Compare the characteristics of different ecosystems (including estuaries/salt marshes, oceans, lakes and ponds, forests, and grasslands).

☐ Should the indicator be deconstructed into smaller pieces? If so, deconstruct the indicator.

- The student will identify characteristics of estuaries/salt marshes ecosystems.
- The student will identify characteristics of ocean ecosystems.
- The student will identify characteristics of lake and pond ecosystems.
- The student will identify characteristics of forest and grassland ecosystems.
- The student will explain characteristics of terrestrial ecosystems.
- The student will explain characteristics of aquatic and terrestrial ecosystems.
- The students will compare terrestrial ecosystems to aquatic ecosystems.

This indicator needs to be deconstructed into many smaller pieces, and these pieces are likely taught as a unit. As the unit is being taught, check that students are able to identify the characteristics of each ecosystem named in the indicator. These smaller teaching objectives are the foundation and scaffolding for the indicator expectation: compare.

☐ Use revised Bloom's taxonomy to identify the correct cognitive level(s) of the indicator and justify your answer.

The cognitive level of the indicator is at the level of **understand** in the revised Bloom's taxonomy. Students are expected to understand and explain the similarities and differences among ecosystems.

☐ Determine which assessment tool is most appropriate for the indicator(s) and justify your choice with specific attributes of that assessment format or the indicator.

Given two graphics (one of a terrestrial ecosystem and one of an aquatic ecosystem) students could be asked to identify and compare the ecosystems in the figures. Comparing the ecosystems means the student has to explain what characteristics are similar and what characteristics are different. If the ecosystems are not identified, the student also has to be able to identify each based on their characteristics. The best assessment tool (one that directly aligns to the expectation in the standard) in the classroom is a constructed-response item (short performance task) with a scoring guide. A constructed-response item allows the teacher to directly target the cognitive level of the indicator, and a rubric allows the teacher to measure a range of student achievement on this indicator.

☐ Show how the indictor could be assessed.

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Figure A

Figure B

Look at Figure A and Figure B. What are the two ecosystems? Explain how these two ecosystems are alike and different. Use as many details as possible to support your conclusions.

Model for Group Performance Task 2:
Middle School Example

☐ Choose a single South Carolina indicator (i.e., instructional objective), write the grade level, the number, and the text.

7-2.1 Apply an algorithm to multiply and divide fractions and decimals.

☐ Should the indicator be deconstructed into smaller pieces? If so, deconstruct the indicator.

- Apply an algorithm to multiply fractions.
- Apply an algorithm to multiply decimals.
- Apply an algorithm to divide fractions.
- Apply an algorithm to divide decimals.

This indicator needs to be deconstructed into smaller pieces because these topics will be taught and measured separately.

☐ Use revised Bloom's taxonomy to identify the correct cognitive level(s) of the indicator and justify your answer.

This standard is asking students to apply an algorithm. This indicator clearly specifies apply because students need to 1) have the procedural knowledge of the algorithm, and 2) use reasoning skills regarding when to apply this algorithm in a real-world situation (e.g., a word problem).

☐ Determine which assessment tool is most appropriate for the indicator(s) and justify your choice with specific attributes of that assessment format or the indicator.

Given a word problem, students could (a) determine the correct algorithm to use, apply, and then select the correct answer in a multiple-choice item (indirect), or (b) determine the correct algorithm to use, show and apply the algorithm in a constructed response question, and provide the correct answer (direct). It would not be appropriate to give a student a straight computation problem to measure this indicator because the student would not be required to set up the algorithm. Applying the algorithm means the student has to reason when to use the algorithm and how to set it up. The best assessment tool (one that directly aligns to the expectation in the standard) in the classroom is a constructed-response item (short performance task) with a scoring guide. A constructed-response item allows the teacher to directly target the cognitive level of the indicator, and a rubric allows the teacher to measure a range of student achievement on this indicator.

☐ Show how the indictor could be assessed.

Jack's mom baked cupcakes for his birthday party. If she baked 36 cupcakes and put sprinkles on 1/3 of them, how many cupcakes will have sprinkles?

Developing a Performance Task

For the Facilitator

Photocopy the *Developing High Quality Performance Tasks* packet and the PowerPoint modules for all teachers. Also copy and provide *Individual Performance Task 3* and the corresponding rubric. Provide the materials packet without the rationales to the teachers. Use the second packet, the one with the rationales, to lead the discussion after the teachers have reviewed the materials.

After viewing the video segment "Creating Standards-Based Performance Tasks" divide into content groups and work for roughly one hour. Let teachers know that they will develop a performance task during the checklist module to use in their classes in the future. The performance task should be designed to measure one or more indicators found in the state standards. In the current module for homework, teachers will select a recently used student performance task to analyze and revise.

Read *Developing High Quality Performance Tasks* to teachers and then have them study the performance task rubrics. Teachers should begin to use these rubrics when looking at corresponding performance task examples. Next review Example 1 and Example 2 tasks with the teachers, and discuss the rationales. Then, have teachers spend 40 minutes individually analyzing and answering the three questions for the five subsequent tasks. Lead a discussion about these examples using the answers provided as a guide.

Next, ask teachers to find a performance task recently assigned to students as homework. Teachers should analyze the task using the three questions. Then revise the task using the information from *Individual Performance Task 3.*

Developing High Quality Performance Tasks

Developing high quality performance tasks requires focusing on tasks with three main characteristics:

- Students should be required to use information stored in long-term memory to show how well they perform the expectations in the indicator.
- The task should elicit student thinking beyond the recall of knowledge or the following of directions.
- The task should be presented using best practice guidelines (e.g., write the task to the students, share the grading criteria).

Newman, Bryk, and Nagaoka (2001) outlined three standards of high quality performance tasks in their research. They found that teachers who used classroom work that incorporated these three standards had students who performed at higher levels on standardized tests than teachers who did not.

Standard 1. Construction of Knowledge
Through the performance task, the teacher requires that students compare, interpret, analyze, synthesize or evaluate information about a topic or concept based upon some sort of stimulus material. Students go beyond recalling details, facts, or procedures.

Standard 2. Disciplined Inquiry: Elaborated Written Communication
Through the performance task, the teacher requires that students substantiate conclusions, interpretations, or generalizations through relevant extended writing, illustrations, or content-based details. Content-based details include explaining a solution path using tables, equations, or diagrams.

Standard 3. Value Beyond School: Connection to Students' Lives
Through the performance task, students connect the topic to experiences, observations, feelings, or situations significant in their own lives. The performance task has relevance to the student beyond the classroom.

Use the following rubrics to classify the cognitive quality of performance tasks in the content area. They do not measure whether they use best practices for presenting the task to students. Use the rubric to determine if the task meets all three Newman, Bryk, & Nagaoka (2001) standards. It is challenging to obtain Standard 3: Value Beyond School, however this should always be your goal. At minimum, a high-quality performance task should meet Standard 1 and Standard 2.

Rubrics for Reading, Writing, and Social Studies Performance Tasks

The task does not meet the standards	The task meets Standard 1	The task meets Standards 1 and 2	The task meets all standards
Assignment is a fill-in-the-blank exercise. The assignment or its parts can be answered with only one or two sentences, clauses, or phrasal fragments that complete a thought. Students are recalling facts or details.	Assignment calls for generalization OR support. Students are asked to draw conclusions, make generalizations or arguments, OR to offer examples, summaries, details, or reasons, but not both.	Assignment calls for generalization OR support. The assignment asks students to draw conclusions or to make generalizations or arguments, AND to substantiate them with examples, summaries, illustrations, details or reasons.	Assignment calls for generalization OR support. The assignment asks students to draw conclusions or to make generalizations or arguments, AND to substantiate them with examples, summaries, illustrations, details or reasons while connecting to students' lives outside of school.

Rubrics for Mathematics and Science Performance Tasks

The task does not meet the standards	The task meets Standard 1	The task meets Standards 1 and 2	The task meets all standards
The assignment comprises a short-answer or computational exercise OR has students complete step-by-step directions that do not require the student to independently construct knowledge.	The assignment asks students to apply mathematical or scientific concepts, draw conclusions, or arguments OR to offer mathematical/scientific examples, summaries, illustration details, or reasons, but not both.	The assignment asks students to apply mathematical or scientific concepts, draw conclusions, or arguments, AND to substantiate them with examples, formulas illustrations, details or reasons.	The assignment asks students to apply mathematical or scientific concepts, draw conclusions, generalizations or arguments, AND to substantiate them with examples, formulas illustrations, details or reasons while connecting to students' lives outside of school.

Adapted Rubrics from Newman, F., Bryk, A., & Nagaoka, J. (2001) have been slightly edited by the South Carolina Department of Education.

Example 1: Grade 3 Writing

Indicators:

3-4.1 Generate and organize ideas for writing using prewriting techniques (for example, creating lists, having discussions, and examining literary models).
3-4.2 Use complete sentences (including compound sentences) in writing.
3-4.3 Create paragraphs that include a topic sentence with supporting details and logical transitions.

Directions:
Are lions a wild animal? Where do lions live and what do they do all day? Brainstorm information that you know about lions. On a separate sheet of paper list the details to help you organize the beginning, middle, and end of your essay. Remember, you need to write in complete sentences, spell words correctly, capitalize correctly, and punctuate correctly. Your grade will be based on your ability to organize and support your ideas, with complete sentences, and correct conventions.

Rationale: In this performance task, third-grade students must draw a conclusion about whether or not a lion is a wild animal. They are asked to complete an extended writing on this topic, and they are required to support their conclusions with relevant details. The essay requires that students make a connection outside of the classroom to information they have read in books, seen on television, or learned at a zoo. Because students are not to use reference books during the task, students are using long-term memory regarding the writing process and conventions. The task asks students to **create.** Using the performance task rubric, the activity would be coded as "The task meets all the standards."

Example 2: Grade 7 Mathematics

Indicator:

7-2.8 Generate strategies to add, subtract, multiply, and divide integers.

Directions

Pick a stock. You have $10,000 to invest. Write down the stock and the current price. Calculate how many shares you can buy at the current price. Every week for the next 2 weeks you will check in the newspaper or on the Internet whether your stock has gone up or down. Chart the progress for your stock using graph paper. Organize your chart to record prices in ¼ points. Newspapers often report the prices in 1/16 points. What will you need to do when you chart prices from the newspaper?

At the end of the 2 weeks, determine whether you have made a profit or loss, and predict what you think your stock will do based on the results of the chart. Decide whether you will buy more or sell your stock. At this point you will write a one-half page report on your stock, what happened to it, and what you decided to do. You will be graded based upon the accuracy of your chart, your conclusion, and the accuracy of the data you use to support your conclusion.

Rationale: Students need to review the data in the chart to draw conclusions about current profits or losses. The demand for charting the stock requires written mathematical communication. By focusing on mathematics related to a stock that students choose to "own," the assignment draws connections to mathematics and students' lives beyond school. To complete this task, students must plot the data, interpret the trends, and draw a conclusion. Although this task takes 2 weeks to complete, students are not told how to solve this problem. This task would be defined at the **apply** level of the revised Bloom's and, using the performance task rubric, it would be coded as "The task meets all the standards."

Edited task originally found in Newman, F., Bryk, A., & Nagaoka, J. (2001). *Authentic intellectual work and standardized tests: conflict or coexistence?* Consortium on Chicago School Research.

Analyzing Performance Tasks for Quality

Directions: Study the following tasks, and answer the three questions below for each task.

- Are students required to use information stored in long-term memory to show how well they perform the expectations in the indicator?
- Does the task elicit student thinking beyond the recall of knowledge or the following of directions?
- Does the task use best practice guidelines (e.g., write the task to the students, share the grading criteria)?

Task One

Indicator:

5-R3.1 Demonstrate the ability to determine word meanings, pronunciations, alternate **word choices**, and parts of speech by using a dictionary and a thesaurus. (2002 ELA Standards)

Directions:
Identify the part of speech of each underlined word below.

1) My room is arranged for comfort and efficiency.
2) As you enter, you will find a wooden table on the left.
3) I write and type.
4) There is a book shelf near the table.
5) On this book shelf, I keep both my pencils and paper supplies.
6) I spend many hours in this room.
7) I often read or write there during the evening.

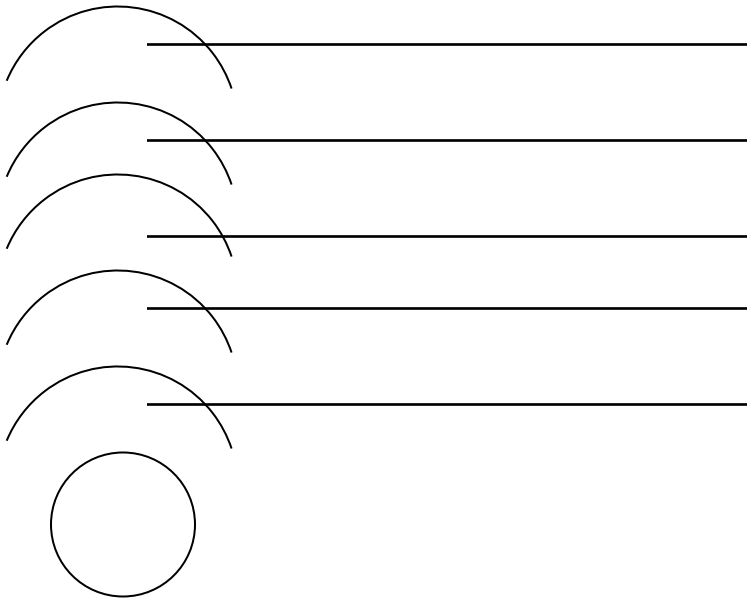
Edited task originally found in Newman, F., Bryk, A., & Nagaoka, J. (2001). *Authentic intellectual work and standardized tests: conflict or coexistence?* Consortium on Chicago School Research.

Task Two

Indicator:

6-4.1 Compare the composition and structure of Earth's atmospheric layers (including the gases and differences in temperature and pressure within the layers).

Directions:
Below is a diagram of Earth and its atmosphere. The student will identify each layer of the atmosphere on the diagram.



Task Three

Indicator:

6-4.2 Compare the composition and structure of Earth's atmospheric layers (including the gases and differences in temperature and pressure within the layers).

Directions:

In the table below, list the layers of the Earth's atmosphere and describe its features.

Layer Name	Features

Compare the features of the layers in a paragraph. Use the following questions and your own knowledge to guide your comparison. Your grade will be based on how well you describe the differences in the features of the layers.

- In which layer is air pressure the greatest?
- In which layer is air pressure the least?
- Which layer is also called the ozone layer?
- In which layer is the range of temperature the greatest?
- In which layer is the temperature the coldest?
- Would clouds be found in the layers?

Task Four

Indicator:

5.1.1 Summarize the aims of Reconstruction and explain the effects of Abraham Lincoln's assassination on the course of Reconstruction. (P, H, E).

Directions:

How were President Johnson's and the United States Congress' aims of Reconstruction similar?

Task Five

Indicator:

8-6.5 Explain the effects of the Great Depression and the lasting impact of New Deal programs on South Carolina, including the Rural Electrification Act, the Civilian Conservation Corps, Works Progress Administration, and Public Works Administration building projects, the Social Security Act, and the Santee Cooper electricity project. (H, E, G, P)

Directions:

Interview a person who lived through the Great Depression. What was life like during that time? How did the person, or their parents, earn a living? If you cannot find a family member who lived during the Depression, interview a son or daughter of a person in your family who lived through the Great Depression. Find out what he/she knows of his parents' lives during this time. Does your family have photos from this time period?

Create an annotated photo collage of your family during this time OR find photos through resources that show the political responses to the Depression in the United States. To complete this project you need to follow these steps.

- Collect 3 pictures that show how the government helped Americans during the Depression OR 3 pictures that show the lives of your family during the Depression.
- Put the pictures in sequential order and write a short caption describing the picture.
- Link the photos to the New Deal programs started by the government during the Great Depression.
- Write an essay describing how the New Deal programs helped America and eventually influenced the lives of your family members. Which program was most important to your family? Use family history details to support your conclusion.

Analyzing Performance Tasks for Quality:
Office of Assessment Rationale

Task One

Indicator:

5-R3.1 Demonstrate the ability to determine word meanings, pronunciations, alternate **word choices**, and parts of speech by using a dictionary and a thesaurus. (2002 ELA Standards)

Directions:
Identify the part of speech of each underlined word below.

1) My room is arranged for comfort and efficiency.
2) As you enter, you will find a wooden table on the left.
3) I write and type.
4) There is a book shelf near the table.
5) On this book shelf, I keep both my pencils and paper supplies.
6) I spend many hours in this room.
7) I often read or write there during the evening.

Edited task originally found in Newman, F., Bryk, A., & Nagaoka, J. (2001). *Authentic intellectual work and standardized tests: conflict or coexistence?* Consortium on Chicago School Research.

Rationale:

- Are students required to use information stored in long-term memory to show how well they perform the expectations in the indicator?

Since the directions do not indicate using a dictionary, students would have to recall information from long-term memory to answer the question.

- Does the task elicit student thinking beyond the recall of knowledge or the following of directions?

Students are engaged in identifying parts of speech. This task does not require that the student construct knowledge.

- Does the task use best practice guidelines (e.g., write the task to the students, share the grading criteria)?

The task does not tell students how they will be graded.

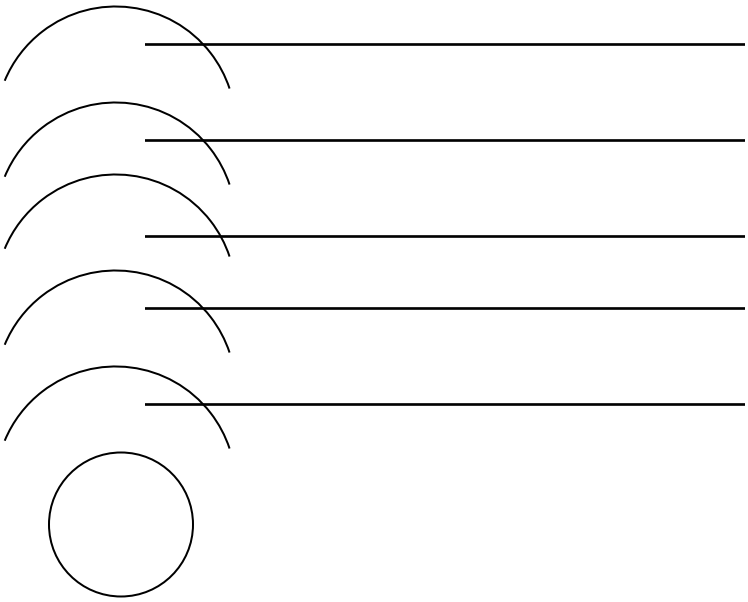
Based upon the performance task rubric, this assignment would be coded as "The task does not meet the standards."

Task Two

Indicator:

6-4.1 Compare the composition and structure of Earth's atmospheric layers (including the gases and differences in temperature and pressure within the layers).

Directions:
Below is a diagram of Earth and its atmosphere. The student will identify each layer of the atmosphere on the diagram.



Rationale:

- Are students required to use information stored in long-term memory to show how well they perform the expectations in the indicator?

To answer correctly, students would have to recall information stored in long-term memory.

- Does the task elicit student thinking beyond the recall of knowledge or the following of directions?

This is a knowledge-based task. Because the task is targeting a lower cognitive level than the indicator, the task is not aligned to the summative statement in the indicator. It is, however, a readiness step for accessing the indicator.

- Does the task use best practice guidelines (e.g., write the task to the students, share the grading criteria)?

The task does not use best performance practice. The directions are not written to the student, and do not indicate how the student will be graded. (This is a good example of a task that could be graded with a checklist because a layer is identified correctly or incorrectly.) Based upon the performance task rubric, this assignment would be coded as "The task does not meet the standards."

Task Three

Indicator:

6-4.2 Compare the composition and structure of Earth's atmospheric layers (including the gases and differences in temperature and pressure within the layers).

Directions:

In the table below, list the layers of Earth's atmosphere and describe each feature.

Layer Name	Features

Compare the features of the layers in a paragraph. Use the following questions and your own knowledge to guide your comparison. Your grade will be based on how well you describe the differences in the features of the layers.

- In which layer is air pressure the greatest?
- In which layer is air pressure the least?
- Which layer is also called the ozone layer?
- In which layer is the range of temperature the greatest?
- In which layer is the temperature the coldest?
- Would clouds be found in the layers?

Rationale:

- Are students required to use information stored in long-term memory to perform the expectations in the indicator?

To answer correctly, students would first have to use long-term memory to recall scientific information about the composition and structure of layers. Then the student would need to contrast the retrieved information.

- Does the task elicit student thinking beyond the recall of knowledge or the following of directions?

Yes. The task requires that students make comparisons and to support the conclusions with scientific information. If the teacher has taught the comparisons, the activity only requires recall. If teachers have taught the scientific information about the features of the layers and require students to make comparisons on the assessment, the students are working beyond the recall level.

- Does the task use best practice guidelines (e.g., write the task to the students, share the grading criteria)?

The directions are written to the student, and explain how the student will be graded. (This is a good example of a task that should be graded with a rubric because students will vary in the degree of support that they provide for the comparisons.) Based upon the performance task rubric, this assignment would be coded as "The task meets Standards 1 and 2." The cognitive level is **understand.**

Task Four

Indicator:

5.1.1 Summarize the aims of Reconstruction and explain the effects of Abraham Lincoln's assassination on the course of Reconstruction. (P, H, E).

Directions:

How were President Johnson's and the United States Congress' aims of Reconstruction similar?

Rationale:

- Are students required to use information from long-term memory to perform the expectations in the indicator?

To answer correctly students would use long-term memory to retrieve information regarding President Johnson's aims of Reconstruction and Congress' aims of Reconstruction.

- Does the task elicit student thinking beyond the recall of knowledge or the following of directions?

If the students know the aims of Reconstruction for both parties, the students are able to draw a conclusion regarding how these aims were similar. However, the task does not ask for details to support the conclusion. Students could simply list similarities. A better performance task question follows:

How were President Johnson's and the United States Congress' aims of Reconstruction similar and different? Use detailed information to support your answer. Your grade will be based on your conclusion with accurate historical information.

- Does the task use best practice guidelines (e.g., write the task to the students, share the grading criteria)?

The directions are written to the student, but do not explain how the task will be graded. (This is also a good example of a task that should be graded with a rubric because students will vary in the degree of support provided for the comparisons.) Based upon the original performance task rubric, this assignment would be coded as "The task meets Standard 1." The revised performance task would be coded as "The task meets Standards 1 and 2." The cognitive level is **understand.**

Task Five

Indicator:

8-6.5 Explain the effects of the Great Depression and the lasting impact of New Deal programs on South Carolina, including the Rural Electrification Act, the Civilian Conservation Corps, Works Progress Administration, and Public Works Administration building projects, the Social Security Act, and the Santee Cooper electricity project. (H, E, G, P)

Directions:

Interview a person who lived through the Great Depression. What was life like during that time? How did the person, or their parents, earn a living? If you cannot find a family member who lived during the Depression, interview a son or daughter of a family friend who lived through the Great Depression. Find out what he/she knows of his parents' lives during this time. Does your family have photos from this time period?

Create an annotated photo collage of your family during this time OR find photos through resources that show the political responses to the Depression in the United States. To complete this project you need to follow these steps.

- Collect 3 pictures that show how the government helped Americans during the Depression OR 3 pictures that show the lives of your family during the Depression.
- Put the pictures in sequential order and write a short caption describing the picture.
- Link the photos to the New Deal programs started by the government during the Great Depression.
- Write an essay describing how the New Deal programs helped America and eventually influenced the lives of your family members. Which program was most important to your family? Use family history details to support your conclusion.

Rationale:

- Are students required to use information from long-term memory to perform the expectations in the indicator?
- To find pictures, students are not using information stored in long-term memory. However, to connect family photos to the programs and to write the essay, students need to recall the lasting impacts of the New Deal program and connect those impacts most relevant to their own families.
- Does the task elicit student thinking beyond the recall of knowledge or the following of directions?
  This task has students draw and support a conclusion about which New Deal program was most important to their own families.
- Does the task use best practice guidelines (e.g., write the task to the students, share the grading criteria)?
  The directions are written to the student, but do not explain how the task will be graded. Based upon the original performance task rubric, this assignment would be coded as "The task meets all the standards." The cognitive level is **understand.**

Individual Performance Task 3:
Reviewing a Performance Task

- ☐ Find a performance task that you recently gave to students.
- ☐ On a separate piece of paper, write the grade, subject area, indicator code (e.g., 5.2-1) and indicator text the task measured.
- ☐ Analyze the task based upon the information you have learned in this module. Use the rubric to determine if the task meets all three Newman, Bryk, and Nagaoka (2001) standards. Based on your analysis, answer the three performance task questions in writing:
    - Are students required to use information stored in long-term memory to show how well they perform the expectations in the indicator?
    - Does the task elicit student thinking beyond the recall of knowledge or the following of directions?
    - Does the task use best practice?
- ☐ Use the revised Bloom's taxonomy to identify the cognitive level that the task most elicits from students and justify your identification.
- ☐ Use the revised Bloom's taxonomy to identify the cognitive level that the indicator expects you to elicit from students and justify your identification. Does your task meet the expectations of the indicator? Use specific details to support your conclusion.
- ☐ After analyzing the performance task for its positive attributes and attributes that need improvement, revise the task. Describe in a paragraph what you revised (or chose not to revise) and why.
- ☐ Grade your work using the attached rubric. Edit your work based on your findings.
- ☐ Turn in your original task, your final task revision, and your separate sheet of paper to document your reflection on the questions asked above.
- ☐ Attach the rubric to the assignment when you submit the completed task.

Rubric for Individual Performance Task 3:
Revising a Performance Task

Name: _____

Criteria	**Scale**				**Score**
	0	**1**	**2**	**3**	
Indicators	Not stated	Indicator(s) not accurately written	Indicator(s) accurately written		
Cognitive skills	Cognitive skills not stated or described inaccurately	*Some* correct application and discussion of cognitive levels, *or* no justification provided for the cognitive level	Correct application and discussion of cognitive levels *and* justification provided for the cognitive level		
Revised Performance Task Directions	Not provided	Directions implicit in the task description but not explicitly written for students	Directions written for students but some aspects of task unclear or directions not appropriate for the grade level	Clear directions written for students, appropriate for the grade level, and include criteria for assessment	
Newman, Bryk, & Nagaoka (2001) performance task standards	The task does not meet the standards	The task meets Standard 1	The task meets Standards 1 and 2	The task meets all the standards	
Long-term memory	The task does not require students to retrieve information from long-term-memory	The task requires that students retrieve information from long-term memory			

Checklists

For the Facilitator

Prior to this session, photocopy the following materials to make a packet for each teacher.

- *Checklist Examples*
- *Individual Performance Task 4*
- *Rubric for Individual Performance Task 4*
- *Using Tables in MS Word to Develop Checklists*
- PowerPoints for the module

Hand out packets after teachers have viewed the video segment "Checklists." Divide teachers into content groups to examine checklists for similarities and differences, for roughly 30 minutes. Then share the similarities and differences of the checklists with the whole group. (We have included an answer sheet for your review.)

Following the discussion, teachers should read the section on *Using Tables in MS Word to Develop Checklists.* After reading the section, teachers should work in content groups to develop a checklist based on a chosen standard. Teachers may wish to use one of the exemplar performance tasks from the previous module or one revised for homework from last session as a stimulus for developing a group checklist.

Have each content group use an overhead transparency to record the results of the work. Then have each content group share work with the group as a whole, briefly presenting the performance task directions and sharing the checklist. Ensure that the criteria for the checklist are either stated explicitly or are implicit in the curriculum standards and the student directions for the performance task. The presentations should take roughly 30 minutes.

Next, ask teachers to complete *Individual Performance Task 4* as homework, using the directions for the task and the rubric. Submit both the performance task (typed) and the rubric at the next session for rating. Use the *Rubric for Individual Performance Task 4* to score each teacher's work.

Checklist Examples

Study the various examples of checklists. Draft a list of similarities and differences to share with the group.

Sample 1

Checklist for a Science Task

___	The hypothesis
___	The independent variable
___	The dependent variable
___	The control
___	The data collected
___	The analysis
___	The conclusion

Sample 2

Point-Allocated Checklist for a Science Task

___	The hypothesis (5 points)
___	The independent variable (3 points)
___	The dependent variable (3 points)
___	The control (3 points)
___	The data collected (2 points)
___	The analysis (4 points)
___	The conclusion (5 points)

Sample 3
Graphing Checklist

Student Directions: Before submitting your graph, be sure to pay close attention to the following details. Your graph(s) will be scored based on this checklist.

Each graph must have the following:

	AXES LABELED CORRECTLY. Independent and dependent variables MUST BE placed on the correct axis. Both axes must be labeled with variables and units. Each axis should have even intervals appropriately scaled.
	DATA POINTS. All points should be plotted accurately and clearly marked.
	GRIDLINES. Use the computer to generate your graph. Be sure to use gridlines for x and y axes.
	APPROPRIATE TRENDLINE. Curve(s) appropriate to data trends. Often this means a best fit line showing the y=mx+b relationship with substituted variables. IF YOU DO NOT NEED A BEST FIT LINE, then connect the points.
	APPROPRIATE SIZE. Make the graph take up as much of the paper as possible. This is easy on a computer. On a sheet of graph paper, you must select a scale for x and y axes that is appropriate.
	APPROPRIATE TITLE. Your title should reflect what was graphed on the y vs. x axes (dependent vs. independent variable).

Keep in mind that you may need to **interpolate**, or **extrapolate** points from your graph. If so, remember rules of precision (significant digits). For a graph that reads to the nearest tenth, your extrapolation or interpolation must be estimated to the nearest hundredth.

Developed by Angie Hill, Blythewood High School

Sample 4

Observational Checklist

Students	**Student Behaviors**						
	Initiates conversation with peers	Responds to questions from a peer	Asks for help when needed	Invites other children to play	Shares materials willingly	Makes suggestions	Accepts the suggestions of others
Allison							
Gerald							
Jose							
Pat							
Rick							
Tamika							
Vanessa							

✓ = Observed
-- = Not Observed

Sample 5

Checklist for Literature Discussion Circles

Date:

Students' Names	Shares details from the story	Listens to others	Extends the ideas offered by others	Contributes new ideas to the discussion
Mary G.				
Rembang Z.				
……..				

O = Observed
-- = No Opportunity to Observe

Sample 6

A Section of a Laboratory Safety Checklist

Personal Protection	Mary G.	…	Rembang Z.
1. Safety glasses are worn **at all times** in the laboratory			
2. Contact lenses are worn with protective eyewear			
3. When provided, gloves are worn for handling certain chemicals and biological materials			
4. Appropriate clothing is worn (e.g., covered to the knee, no bare midriffs or shoulders)			
5. Appropriate shoes worn – no sandals, thongs, open-toed or open-heeled shoes			
6. Sleeves are rolled up and loose clothing tied up			
7. Long hair is tied back			
8. No food or drink (including water bottles) in the labs			
9. Hands are washed after working with chemicals and biological materials			

O = Observed
-- = No Opportunity to Observe

Summarized from Zaborowski, D. (n.d.). Laboratory safety guidelines. Retrieved February 1, 2011, from science.kennesaw.edu/biophys/LabSafetyGuideNoPic.doc.

Similarities and Differences:
Office of Assessment Rationale

Similarities:

- The criteria are stated in short phrases: Checklists A-D.
- All checklists have a place to record whether each criterion was met.
- All the checklists could be used throughout the year as students engage in conducting science investigations (Checklists A and E) and participate in literature circles (Checklist D).
- Some could be converted to rubrics with rating scales: Checklists A, C, and D.
- All could serve formative assessment purposes by providing students with criteria to review work as tasks are completed.

Differences:

- Some used the designations of *Observed* or *No Opportunity to Observe*: Checklists C, D, and E.
- One accompanied each criterion with descriptive information about the criterion: Checklist B.
- One specifies the point-value of each criterion: Checklist A.
- One addresses the development of social skills: Checklist C.

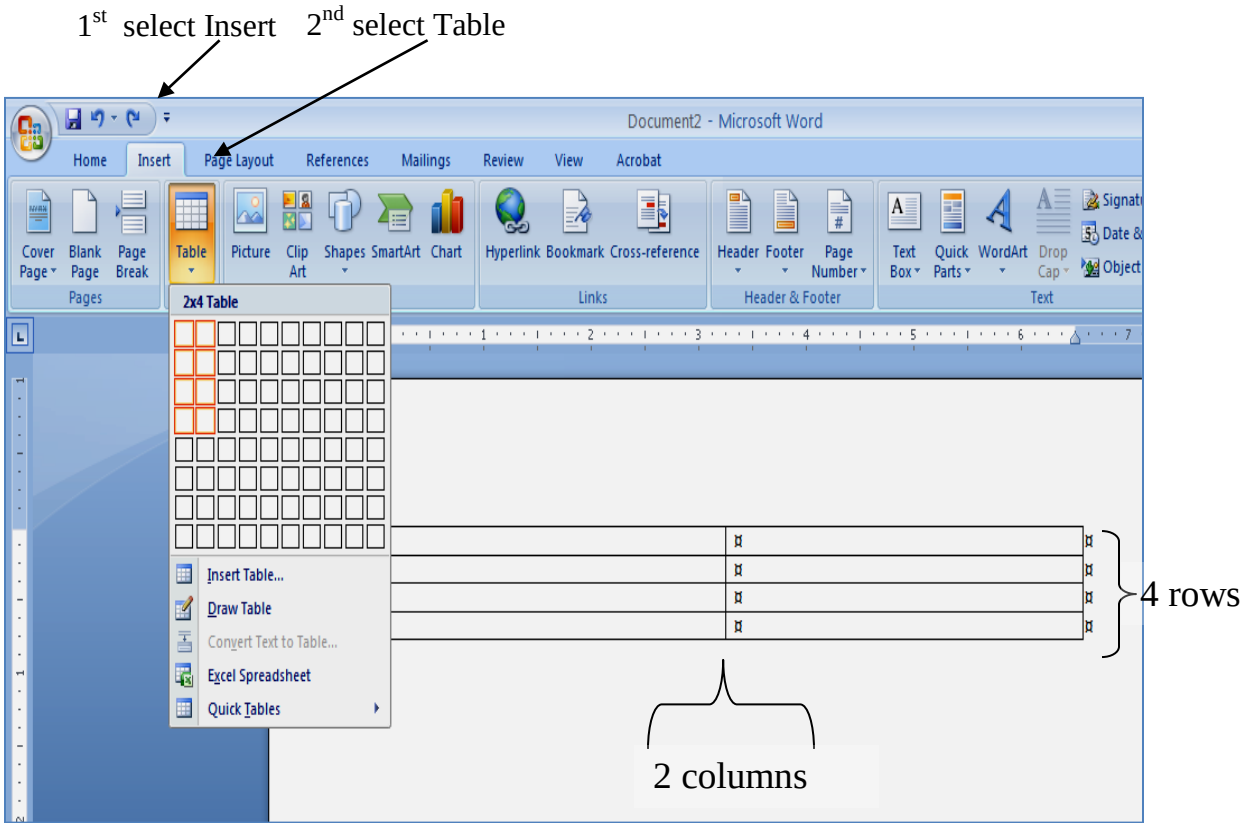
Using Tables in MS Word to Develop Checklists

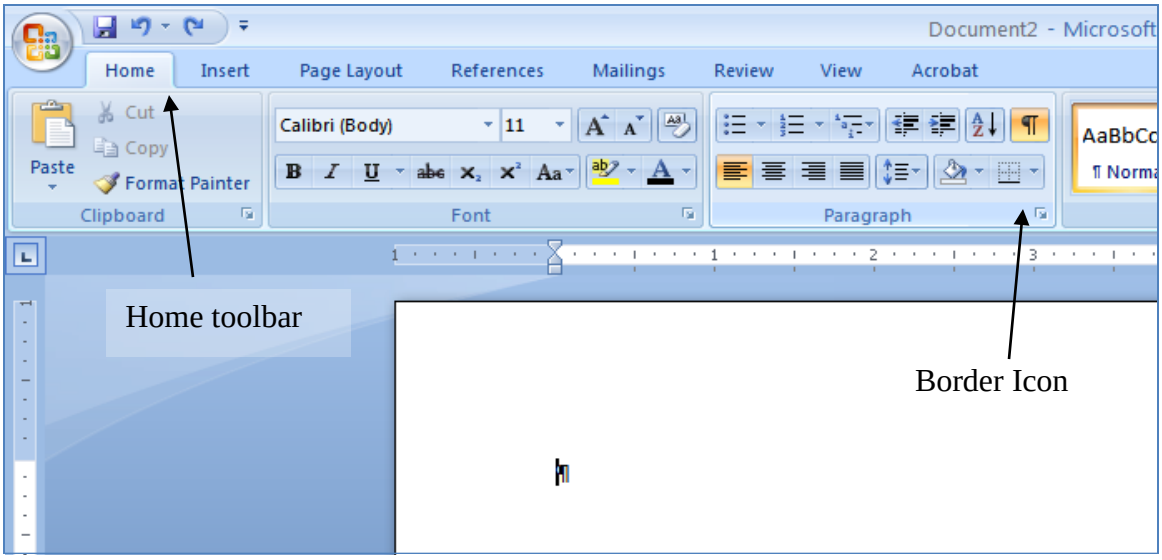
Step 1: Determine your checklist criteria. Next, count the number of criteria you have developed.

Step 2: On the MS Word menu bar, click on the "Insert" tab, then select, "Table." Use the cursor to highlight the correct number of columns and rows. For your checklist, choose 2 columns. Then, to determine how many rows you need to create, add 1 to the number of criteria you have established. In the sample below, you see that two columns and four rows were selected.

Step 3: The first row is your header row. In subsequent rows, type in the criteria you developed. Remember, use either 14-point or 12-point font, depending upon the grade level you teach. Larger font is often used for younger children.

Step 4: To create visible lines in your table or to change the style and size of the lines, highlight the table, right click with the cursor on the table, select the option "Borders and Shading" in the menu, and then click the "Borders" tab. Highlight the entire table (or if you want to apply a border only to specific table cells, highlight just those cells), select the border options you want (you can use the "Preview" window), and then click "OK." You can also use the borders icon on the MS Word "Home" tab. See the slide that follows.





Your table should look similar to this one:

Checklist for Communications

Criteria	Achievement
Speaks audibly	✓
Makes eye contact with audience	
Uses correct English	✓
Presents accurate information	✓

Individual Performance Task 4:
Developing a Checklist

Identify one or more indicators that can be measured by a performance task. (It is possible to use multiple indicators in a performance task.) Make sure to note which indicators are the primary focus and which indicators are merely supportive and are therefore, not assessed. For this task, avoid knowledge-based indicators.

- ☐ Write the grade, subject area, indicator code (e.g., 5.2-1) and indicator text that the task measures.
- ☐ Develop a task that meets all three Newman, Bryk, and Nagaoka (2001) standards.
- ☐ Use the revised Bloom's taxonomy (Anderson & Krathwohl, 2001) to identify the cognitive level that the task most elicits from students, and justify your identification.
- ☐ Use the revised Bloom's taxonomy to identify the cognitive level that the indicator expects you to elicit from students, and justify your identification. Does your task meet the expectations of the indicator? Use specific details to support your conclusion.
- ☐ Develop your checklist using the tables feature in MS Word.
- ☐ If the checklist is to be given to students as part of the task directions, refer to the checklist in the directions for the performance task.
- ☐ Turn in your task and your checklist.

Rubric for Individual Performance Task 4:
Performance Task and Checklist

Name: _____

Criteria	Scale				Score
	0	**1**	**2**	**3**	
Indicators	Not stated	Indicator(s) not accurately written	Indicator(s) accurately written		
Cognitive skills	Cognitive skills not stated or described inaccurately	*Some* correct application and discussion of cognitive levels, *or* no justification provided for the cognitive level	Correct application and discussion of cognitive levels *and* justification provided for the cognitive level		
Task Directions	Not provided	Directions implicit in the task description but not explicitly written for students	Directions written for students but some aspects of task unclear or directions not appropriate for the grade level	Clear directions written for students, appropriate for the grade level, and include criteria for assessment	
Newman, Bryk, & Nagaoka (2001) performance task standards	The task does not meet the standards	The task meets Standard 1	The task meets Standards 1 and 2	The task meets all the standards	
Long-term memory	The task does not require students to retrieve information from long-term memory	The task requires that students retrieve information from long-term memory			
Checklist	Not provided	Some checklist elements missing or checklist not based on targeted state indicators	Only minor faults in checklist, or checklist based only *somewhat* on targeted state indicators	Clear checklist for guiding observations or review of a task based on targeted state indicators	

Developing a Rubric

For the Facilitator

Prior to this session, photocopy the following materials and make a packet for each teacher.

- *Student Directions and Rubric for an Eighth-Grade Social Studies Project on the Women's Suffrage Movement in South Carolina*
- *Rubric for Grading the Women's Suffrage Movement Student Directions and Rubric Discussion*
- module PowerPoint

Next, make a second packet for each teacher by photocopying these materials.

- *Using Tables in MS Word to Develop Rubrics*
- *Individual Performance Task 5*
- *Rubric for Individual Performance Task 5*

For yourself, copy the *Rubric for Grading the Women's Suffrage Movement Student Directions and Rubric* and the subsequent discussion questions onto an overhead transparency. After the teachers have viewed the video segment "Developing Rubrics," hand out the packets containing the women's suffrage movement task. Ask the teachers to spend approximately 15 minutes independently analyzing both the positive and the negative attributes of the student directions and rubric. Have teachers rate the task directions and rubric using the *Rubric for Individual Performance Task 5: Developing a Rubric.*

Next, lead a discussion with the entire group about the women's suffrage performance task and the rubric. Place the discussion questions transparency on an overhead projector. As you are leading the discussion, tally common attributes, concerns, and thoughts that teachers point out when answering the following questions.

A. What were positive attributes of the student directions and the rubric?

B. What were negative attributes of the student directions and the rubric?

C. Is it ever appropriate to **assess** students on their ability to collaborate with one another? If so, in which disciplines?

D. What is the measurement intent of the performance task and rubric?

Teachers should note that the performance task directions help to focus the content and direction of the oral presentation. The rubric provides an example of basic rubric-writing guidelines:

- The language of the criteria is parallel across the categories.
- Desired traits are described in terms of quality, not quantity. For example, rather than writing "students provide five details under the criteria for the written report", the author describes the details as being "rich." Using qualitative descriptions, rather than numbers or quantitative descriptions, improves the clarity and

- The scale accurately moves from low on the left-hand side to high on the right-hand side.

If the following points do not come up during the discussion period, the facilitator should point out that

- The task directions do not provide students with the assessment criteria.
- The task directions do refer students to the rubric.
- The task is a learning opportunity, not an assessment. Students are working in a group and are not required to retrieve information from long-term memory.

The facilitator should also stress the following points.

Collaboration makes it difficult to measure what a student independently knows and can do. If teachers wish to measure what a student knows and can do independently, then they cannot measure any work that the particular student has done with any other student. Although many of our school systems have mission statements that center on producing productive citizens, most state standards do not have collaboration as a component—other than perhaps those in drama or in music, where student work within an ensemble is stressed. Remember that the criteria for a project should come from the language of the standards. Remember also that it is not appropriate to grade students while they are working in groups. This fact does not imply that students should never engage in group work. Group work is a great way of reviewing the concepts that have been taught, but it is not a good way to measure what an individual student knows.

Still, teachers may feel strongly that students should participate in group learning experiences. In such cases, it is important that teachers model the particular process and have students practice the process as a group. For example, after students have seen the teacher model the report-writing process and have practiced the skills in a group, they should then be ready to use the same process to develop individual reports on another topic. These individual reports are what the teacher will use to assess students. This type of instructional sequence models the complex skills that students should learn. The model not only provides a learning opportunity, but also assesses student achievement on an individual basis.

Following is another important point to consider with your teachers. *What is the measurement intent of the task?* If you look closely at the instructions, you will see that this task is based on indicator 8-6.3: "Summarize the political, social, and economic situation in South Carolina following World War I, including progress in suffrage for women, improvements in daily life in urban and rural areas, and changes in agriculture and industry." Although this project may support several English language arts standards, the focus of the grading should be the social studies content. The criteria should be based on the student's explanation of issues and figures associated with the progress of the women's suffrage movement after World War 1 and the impact of those issues on women's suffrage in South Carolina and in the nation as a whole in the early twentieth century.

At the beginning of this session, you asked teachers to rate the performance task and rubric. Place the *Rubric for Grading* transparency on the overhead projector. The suggested scores for the task and rubric follow:

Indicator = 0	The indicator is not stated on the task.
Student directions = 2	Directions written for students but unclear in some aspects – the directions do not stipulate the criteria upon which the task will be graded.
Performance task standards = 2	The task meets Standards 1 and 2. Students have to draw conclusions regarding the similarities of the suffrage movement in South Carolina and the nation and to support this information with relevant details.
Long-term Memory = 0	The task does not require that student retrieve information from long-term memory. They are able to use resources to find the answer.
Rubric = 1	The rubric criteria are not based on targeted *social studies* indictors.

Review these scores and the associated descriptions with the teachers. Then read what would have been necessary to get the highest scoring point on rubric.

Student Directions and Rubric for an Eighth-Grade Social Studies Project on the Women's Suffrage Movement in South Carolina

You will work in groups of three on this project. Collaborate with members of your group to accomplish the following tasks:

1. Use the Internet and at least three different books to develop a presentation that describes how World War 1 influenced the progress women made toward getting the right to vote in the United States. Determine how this progress compared to what was occurring in South Carolina during this time period.
2. Create a tri-fold poster display to use when your group makes its presentation to the class. Refer to your rubric as you develop your project.
3. Make plans for giving your group's oral presentation to the class. You will need to determine who will say what. Each person should present a portion of the material. The entire presentation should be no longer than 6 minutes.

Your group's oral presentation and the tri-fold poster display should **compare** the following. Use as many relevant details as possible.

A. What caused women to become involved in the women's suffrage movement in South Carolina and in the nation?

B. Suffrage issues in South Carolina and in the nation.

C. The ratification of the 19th amendment in South Carolina and in other states.

Rubric for an Eighth-Grade Social Studies Project

Criteria	**Scale**				**Score**
	1	**2**	**3**	**4**	
Oral presentation	The oral presentation was not organized, and/or not every student participated.	The oral presentation was *somewhat* organized, but not every student participated or appeared knowledgeable. OR The oral presentation was not well organized, and although each student participated, not every student appeared knowledgeable.	The oral presentation was well organized; each student participated and was *somewhat* knowledgeable about the material he or she presented.	The oral presentation was well organized; each student participated, and was knowledgeable about the material he or she presented.	
Tri-fold display	The oral presentation did not include a display.	The display was not a tri-fold poster and did *not* include most of the required content areas, the pictures of each woman, or the students' names.	The tri-fold display was *somewhat* attractively set up and included *most* of the required content areas as well as pictures of each woman and the students' names.	The tri-fold display was attractively set up and included the required content areas as well as pictures of each woman and the students' names.	
Collaboration	The group did not work together as an organized team; therefore, elements of the report were missing.	The group was not a well-organized team; it was evident that many problems occurred, that these problems were not resolved, and that one or two students were the main contributors to the group's work.	The group was a *mostly* well-organized team; the team members got along well with one another, worked out any problems that occurred, and contributed *somewhat* equally to the group's work.	The group was a well-organized team; the team members got along well with one another, and they contributed equally to the group's work.	

Rubric for Grading the Women's Suffrage Movement Student Directions and Rubric Discussion

Criteria	**Scale**				**Score**
	0	**1**	**2**	**3**	
Indicator	Not stated	Indicator not accurately written	Indicator accurately written		
Student directions	Not provided	Directions implicit in task description but not explicitly written for students	Directions written for students but unclear in some aspects	Directions, including criteria for assessment, clearly written for students	
Newman, Bryk, Nagaoka (2001) performance task standards	The task does not meet the standards	The task meets Standard 1	The task meets Standards 1 and 2	The task meets all the standards	
Long-term memory	The task does not require students to retrieve information from long-term memory	The task requires that students retrieve information from long-term memory.			
Rubric	Not provided	Some elements missing from rubric or criteria not based on targeted state indictors, or language from the indicators not used	Only minor faults in rubric or criteria based only *somewhat* on targeted state indictors and only *some* language from the indicators used	Clear rubric delineating levels of performance based on targeted state indictors and using language from the indicators	

Questions for the Women's Suffrage Movement Task and Rubric

A. What were positive attributes of the student directions and the rubric?

B. What were negative attributes of the student directions and the rubric?

C. Is it ever appropriate to **assess** students on their ability to collaborate with one another? If so, in which disciplines?

D. What is the measurement intent of the performance task and rubric?

Next, teachers will develop a performance task and a corresponding rubric. Have them divide into content groups and work for roughly an hour. Using transparencies, each group should develop a performance task and rubric. Tell the content groups that they may use the *Individual Performance Task 5* directions as a guide for their work. Next, each group should briefly present the performance task directions to the entire group, and then share the rubric in more detail.

The criteria for the rubric should be based on the language used in the state indicator. It is always a good idea to have the indicator and the rubric on the overhead transparency at the same time to help the teachers determine if the rubric is aligned with the standard.

Look for these key rubric issues:

- The scale of an analytic rubric should move from left to right, just as we go from left to right when we read English. An analytic rubric shows a continuum of learning or understanding. The convention in creating such a rubric is to build from the lowest-scoring category to the highest-scoring category. Similarly, in creating a holistic rubric, growth is shown by placing the highest-scoring category at the top and the lowest-scoring category at the bottom.

- If teachers build the rubric so that mistakes are counted, they have built a checklist (in which the criterion is either correct or incorrect, or present or absent) using a rubric layout. They have not described the types of mistakes, the quality of work, or the continuum of proficiency one would expect to see. When teachers count mistakes, they often are actually measuring the degree of students' complying with given directions, rather than the degree of students' learning.

These presentations should take roughly 30 minutes.

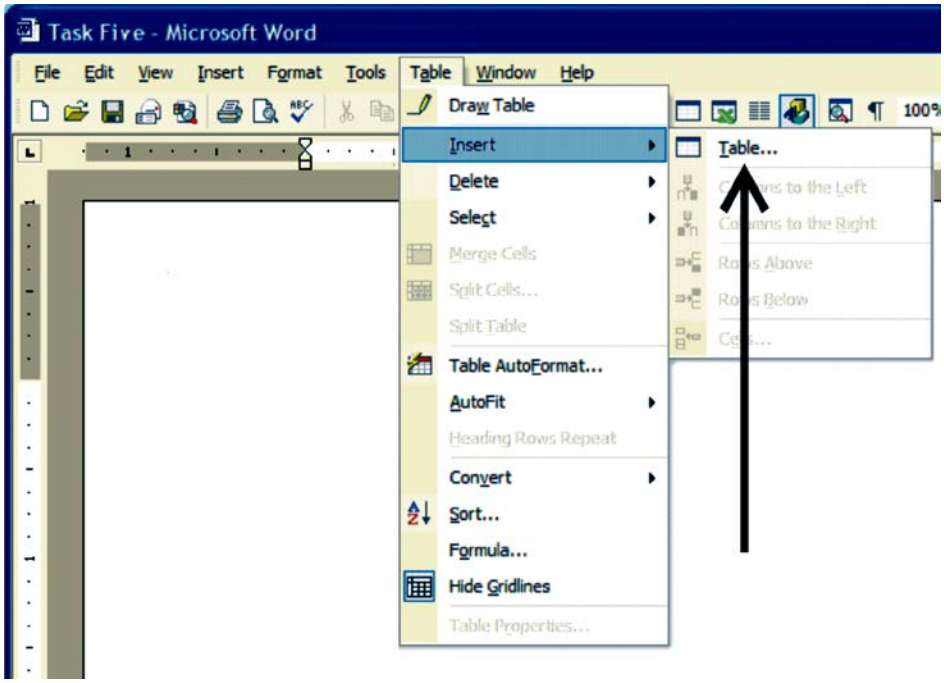
As an assignment for the next session, ask teachers to create a typed performance task and a rubric using the directions for Individual Performance Task 4 and the rubric. You may find it helpful to reiterate that teachers should attach a copy of the rubric to the assignment to be used to rate their work.

Use the rubric to score each teacher's work. When you rate each task, focus on whether the teacher also uses indicator language and parallel structure within the rubric. Also determine whether the rubric content is aligned with the indicators and the performance task directions.

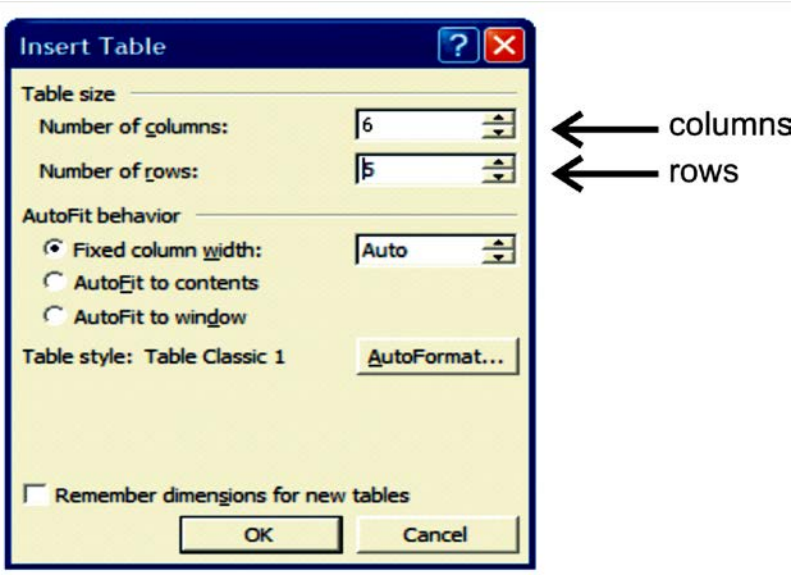
Using Tables in MS Word to Develop Rubrics

Step 1: Determine your rubric criteria. Will you use a holistic rubric or an analytic rubric? These directions describe the process for building an analytic rubric format. Next, determine the maximum number of levels of performance that you can describe. You will use this information to determine how many rows and columns to enter.

Step 2: Click "Table" on the main Word toolbar. Next, click "Insert" from the drop-down menu and then click "Table."



Step 3: To create *columns* for your rubric, add 2 to the number of performance levels your rubric contains. For example, if your point-value scale is 0 through 3, you have a total of 4 performance levels, or point-value numerals. Adding 2 to that number gives you a total of 6 columns. To create *rows* for your rubric, count the number of criteria you have established—"Data", "Conclusions", and so on—and add 1 to that number. For example, if you have 4 criteria, you will need to create 5 rows. Remember, use either 14-point or 12-point font, depending upon the grade level you teach.



Step 4: In the first row—the header row—type your headings: for example, the word "Criteria" in the first column, the numbers that are your point-values (e.g., 0, 1, 2, 3), and then the word "Score" in the last column. In the subsequent rows, type in the criteria you have established: for example, "Data", "Conclusions", and so on.

The example rubric on the next page is constructed as a table that uses 6 columns and 5 rows, with the first row—the header row—containing a single-celled half-row for the heading "Scale" and a 4-celled half-row for the point values.

Follow these steps to create the two half-rows:

1. Place your curser in any one of the cells that contain the numbers for the point-values, and leave it there. (You will be able to see it blinking).
2. Click "Table" on the main Word toolbar, then click "Insert" from the drop-down menu and then click "Rows Above".
3. Merge the cell that contains the word "Criteria" with the empty cell above it: highlight both cells and then click "Merge Cells" in the "Table" drop-down menu.
4. Use the same process to merge the cell that contains the word "Score" with the empty cell above it: highlight both cells and then click "Merge Cells" in the "Table" drop-down menu.
5. Use the same process to merge the 4 *empty* cells *above* the cells that contain the point-value numbers: highlight the 4 cells and then click "Merge Cells" in the "Table" drop-down menu.
6. Type in the word "Scale" in the new single cell you have created, being sure to center the word.

Step 5: To create visible lines in your table or to change the style and size of the lines, click "Format" on the main Word toolbar. Next click "Borders and Shading" in the drop-down menu and then click the "Borders" tab. Highlight the entire table (or if you want to apply a border only to specific table cells, highlight just those cells), select the border options you want (you can use the "Preview" window), and then click "OK". You can also use the borders icon on the Word "Formatting" toolbar, which you will find in the list that appears when you click "View" on the main Word toolbar and then click "Toolbars" in the drop-down menu.

Sample Science Rubric

Criteria	**Scale**				**Score**
	0	**1**	**2**	**3**	
Problem	No problem posed	Problem posed			
Hypothesis	No hypothesis	Hypothesis clearly stated but independent and dependent variables *not* explained, or independent and dependent variables clearly explained but hypothesis *not* stated	Hypothesis clearly stated but independent and dependent variables *not* clearly explained	Hypothesis clearly stated and independent and dependent variables *clearly* explained	
Data	Data not presented	Data inaccurately presented through graph, chart, table, or drawing	Data presented through graph, chart, table, or drawing but with some inaccuracies	Data presented accurately through graph, chart, table, or drawing	
Conclusions	Conclusions not presented	The problem, the accuracy of the hypothesis, and the role of independent and dependent variables *inaccurately* addressed in conclusions	The problem, the accuracy of the hypothesis, and the role of independent and dependent variables *somewhat* accurately addressed in conclusions	The problem, the accuracy of the hypothesis, and the role of independent and dependent variables *accurately* addressed in conclusions	

Individual Performance Task 5:
Developing a Rubric

In this assignment you will be developing a *new* performance task based on an indicator that is different from the one that you used when you submitted a performance task in the last module. Because you will be using this task in a subsequent module, develop a performance task that would be appropriate to give your students in two to three weeks' time.

- ☐ Choose one or more indicators that lend themselves to performance assessment. (It is possible to use multiple indicators in a performance assessment.) Make sure to note which standards are the primary assessment indicators and which indicators are merely supportive and are, therefore, not assessed. Avoid knowledge-based or behavioral indicators for this task.
- ☐ Write the indicator(s) to be assessed through the performance task and rubric.
- ☐ Explain why a rubric is the appropriate form of assessment for the standard.
- ☐ Use the revised Bloom's taxonomy to identify the main cognitive level that will be assessed. Using the language of the indicator(s) and examples from the task, justify your identification.
- ☐ Develop your performance task directions for the students. The task should use the best practices you learned about in the performance task module, not including group work.
- ☐ Use the table features in MS Word to develop the rubric scaffold. The rubric should incorporate the language of the targeted state indicator(s).
- ☐ Use the rubric on the following page to guide the development of your performance task and corresponding rubric.
- ☐ Attach the rubric to the assignment when you submit the completed task.

Rubric for Individual Performance Task 5:
Developing a Rubric

Name: _____

Criteria	**Scale**				**Score**
	0	**1**	**2**	**3**	
Indicator	Not stated	Indicator not accurately written	Indicator accurately written		
Justification for the use of a rubric	Not stated or linkage not based on attributes of a rubric	Attempt to link the indicator to be assessed and the attributes of a rubric	Clear linkage between the indicator to be assessed and the unique attributes of a rubric		
Cognitive skills	Cognitive skills not stated or cognitive skills described inaccurately	*Some* correct application and discussion of cognitive levels, *or* cognitive skills less rigorous than the level implied by the indicator *or* no justification provided for the cognitive level	Correct application and discussion of cognitive levels, *and* cognitive skills equally as rigorous as the level implied by the indicator *and* justification provided for the cognitive level		
Student directions	Not provided	Directions implicit in task description but not explicitly written for students	Directions written for students but unclear in some aspects or not appropriate for the grade level	Directions, including criteria for assessment, clearly written for students and appropriate for the grade level	
Newman, Bryk, & Nagaoka (2001) performance task standards	The task does not meet the standards	The task meets Standard 1	The task meets Standards 1 and 2	The task meets all the standards	
Long-term memory	The task does not require students to retrieve information from long-term memory	The task requires that students retrieve information from long-term memory			
Rubric	Not provided	Some elements missing from rubric or criteria not based on targeted state indictors, or language from the indicators not used	Only minor faults in rubric or criteria based only *somewhat* on targeted state indictors and only *some* language from the indicators used	Clear rubric delineating levels of performance based on targeted state indictors and using language from the indicators	

Self-Assessment

For the Facilitator

Photocopy the following materials and make a packet for each teacher: the *NAEP Narrative Writing Holistic Rubric* page, the cover sheet with teacher directions and six sample student essays. Also copy the module Power-Points. Note that you will need to bring highlighters to this session for teachers to use.

Distribute the packet of materials to all the teachers after they have viewed the video segment: "Self-Assessment." In this module, you will be modeling how to use a rubric and exemplar responses to teach students performance expectations for the learning target. This is a first step towards helping students learn self-assessment practices.

Steps:

1. Read the NAEP rubric and writing prompt (quoted on the cover sheet).
2. Ask teachers to read and rate the six student essays, based on the rubric.
3. Next, read aloud the NAEP scorer's comments for each sample essay to the group.

Commentary on paper 1:

"'Excellent' responses [5 points] provided detail and development across the response and exhibited sentence variety and good word choices. The sample response . . . uses good descriptive detail [e.g., "big clean windows with bright, warming rays of sunshine streaming"] to develop events that occur over the day, doing so with sentence variety and even some suspense, as when the security SWAT team bursts into the office."

- Ask teachers to highlight in yellow good descriptive detail in the sample response. Here are some examples of what teachers should highlight.
    - big clean windows
    - bright, warming rays of sunshine streaming
    - freshly cut grass
    - neat little rows

Commentary on paper 2:

"'Uneven' responses [2 points] often identified actions they would perform as president, but listed them rather [e.g., "call family", "eat breakfast", "ride"] than developing them into a full story, as does the [sample 2] response. . . ."

Commentary on paper 3:

"'Unsatisfactory' responses [0 points] offered little or no coherent writing. The [sample 3] response . . . consists of an opening line to a story based on the prompt."

Commentary on paper 4:

"'Sufficient' responses [3 points] told complete stories with some detail. While parts of 'Sufficient' stories were generally related, usually there were few or no transitions [i.e., the same type of transition technique was used at the beginning of each paragraph; the transitions were not varied]. The [sample 4] 'Sufficient' response offers a simple sequence of events with a few details (e.g., '. . . except for one woman who was really stuck up . . .'). Sentences are unvaried and word choices are mostly simple."

- Ask teachers to highlight (in pink) transitions in this sample response. Repeat the activity for paper 1. Note in this paper the same type of transition occurred in each instance. Here are some examples of what teachers should highlight in paper 4:
    - Next, it was off to a press conference.
    - Then I went to meet Congress…
    - Next we went to dinner at this really fancy Italian place.
    - Lastly, I got to tuck my kids into bed…

- Here are some examples of what teachers should highlight in Paper 1:
    - This is how it started. (Notice it is the last sentence in the first paragraph.)
    - Then I went to the office.
    - After that, the day went on without another incident. (first sentence of paragraph)

Commentary on paper 5:

"'Insufficient' responses [1 point] attempted to tell stories but were extremely brief, disorganized, or marked by severe errors in sentence control and/or grammar. The [sample 5] response is very brief and what is there exhibits a lack of sentence control."

Commentary on paper 6:

"'Skillful' responses [4 points] provided more depth to the stories than 'Sufficient' responses by developing events and characters with detail. In the [sample 6] response . . . , the student developed some parts of the response, including the feeling of waking up as president in new surroundings. While there is some good sentence variety, there are also lapses in continuity caused by gaps in development of the remainder of the day and evening."

Ask teachers to use a highlighter in a different color to contrast the descriptive detail in paper 1 with the descriptive detail in paper 6. Ask them to compare the details and development in the later stages of each essay to discern the difference.

Next, ask teachers to re-read paper 4. After having teachers divide into pairs, ask the teachers to edit and add text to paper 4 to change the paper from a score of 3 to a score of 6. Give the teachers approximately 20 minutes for this task. Teachers should share edited essays and link revisions to the rubric criteria.

Next lead a discussion with the teachers using the following questions:

- How does having exemplar responses for each rubric point help students to understand expectations for their own performance?
- How does improving an exemplar paper help students to understand expectations for their own performance?
- Why are opportunities to revise important to helping students meet expectations for performance?
- Assume that students will need up to 12 opportunities with this type of experience in order to improve performance. What opportunities can you offer?

NAEP Narrative Writing Holistic Rubric

The Holistic rubric, writing prompt, sample student essays, and scorers' commentaries that appear in this section are taken from the Web site of the National Center for Education Statistics, United States Department of Education, at:

http://nces.ed.gov/nationsreportcard/ITMRLS/search.asp?picksubj=Writing&pickgrade=8 and http://nces.ed.gov/nationsreportcard/pdf/main2002/2003529b.pdf.

The point values have been added for purposes of this staff development.

Score & Description
Excellent 5 points • Tells a clear story that is well-developed and shaped with well-chosen details across the response. • The story is well organized with strong transitions. • Sustains variety in sentence structure and exhibits good word choice. • Errors in grammar, spelling, and punctuation are few and do not interfere with understanding.
Skillful 4 points • Tells a clear story that is developed and shaped with details in parts of the response. • The story is clearly organized, but may lack some transitions and/or have occasional lapses in continuity. • Exhibits some variety in sentence structure and some good word choices. • Errors in grammar, spelling, and punctuation do not interfere with understanding.
Sufficient 3 points • Tells a clear story that is developed with some details. • The parts of the story are generally related, but there are few or no transitions. • Exhibits control over sentence boundaries and sentence structure, but sentences and word choice may be simple and unvaried. • Errors in grammar, spelling, and punctuation do not interfere with understanding.
Uneven 2 points May be characterized by one or more of the following: • Attempts to tell a story, but parts of the story are unclear, undeveloped, list-like, or repetitive OR offers no more than a well-written beginning. • Unevenly organized; parts of the story may be unrelated to one another. • Exhibits uneven control over sentence boundaries and sentence structure; may have some inaccurate word choices. • Errors in grammar, spelling, and punctuation sometimes interfere with understanding.
Insufficient 1 point May be characterized by one or more of the following: • Attempts to tell a story, but the attempt may be a fragment and/or very undeveloped. • Very disorganized throughout the response OR too brief to detect organization. • Minimal control over sentence boundaries and sentence structure; word choice may often be inaccurate. • Errors in grammar or usage (such as missing words or incorrect word use or word order), spelling, and punctuation interfere with understanding in much of the response.
Unsatisfactory 0 points May be characterized by one or more of the following: • Responds to prompt, but provides little or no coherent content OR merely paraphrases the prompt. • Has no apparent organization OR consists of a single statement. • Minimal or no control over sentence boundaries and sentence structure; word choice may be inaccurate in much or all of the response. • A multiplicity of errors in grammar or usage (such as missing words or incorrect word use or word order), spelling, and punctuation severely impedes understanding across the response.

TEACHER DIRECTIONS

Read the NAEP narrative writing holistic rubric and the writing prompt below. Next, read each of the six student essays written in response to the prompt.

NAEP Specific Writing Prompt

"Imagine that you wake up one morning to discover that you have become the President of the United States. Write a story about your first day as President."

Paper 1

Today was my first day in office as president of the United States Wow! What a huge job! Today was a very confusing day for me. This is how it started.

I woke up early and get ready for the day. I took a shower, ate breakfast, and got dressed in my very best outfit. Then I went to the office.

The office was huge! It had big clean windows, with bright, warming rays of sun shine streaming through the spotless glass. Out the window, I saw a huge lawn of freshly cut grass, that was as green as I had ever seen. I could see the lawnmower as it cut in neat little rows and columns, and I opened a window to smell the wonderful aroma of that fresh cut grass.

All of the sudden, I heard the ear-piercing shriek of a fire alarm. I saw red flashing lights all around me, and I could hear the words, "Security Breach!" being shouted in the hallway. Then the SWAT Team burst in to the room and shouted, "Don't move! Put your hands on your head! Turn around facing me, and spread your legs!"

As soon as I turned around, they all started apologizing. I told them not to worry about it, and they went on their way.

After that, the day went on without another incedent. I could hear the phones at my secretary's desk ringing off the hook. Many important looking people came in to ask my advice on some of the nation's issues, and I answered all their questions to the best of my ability.

At lunchtime, I took an extra long lunch break to tour the White House. I never realized how big it was! I got lost three times, and I had to use my cell phone to call my secretary. She had to come find me and bring me back to the office.

The actual food at lunch was weird. I got all these different gourmet foods, half of which, I didn't even eat. Tomorrow I'll have to ask for McDonald's.

When I got back to the office, my personal phone was ringing. It was one of my friends from back home, wondering how I was doing. I was in tears by the time I hung up, because I realized just how much I miss my friends.

The day started off good, and I felt like I had tons of luxurious space around me, but after the phone call I felt like I was trapped in a small cage.

I decided to go for a walk outside with my dog Suzie. The fresh air made me feel much better.

I don't know if I can do this job, but I'll try my best!

Paper 2

I would do a lot of things on my first day as president. The first thing I would do is call my family. Then I will eat an enormous breakfast. Then I would ride through Washington DC waving hi to everyone. I would then tour the White House and look at all of my suits. I would then look at all of money and go to the store. I would buy anything I wanted and by presents for my family. Then I would go back and study all of my powers. Then I would eat a very large lunch and dinner. Then I would go to sleep. All in all, I would do a lot of things on my first day as President

Paper 3

I wake up today and found out I'm the president.

Paper 4

What a great day I had, long, but great! It started out with just getting used to the oval office, it sure is big! That chair I have is about the most comfortable chair ever made!

I couldn't do to much sitting because before I knew it I was signing every document known to man kind! My hand was so sore when I got done!

Next it was off to a press conference. I was asked everything from where were you born to what was you college degree. Thankfully I got to sit down after a while and watch the vice President get drilled with questions.

Then I went to meet Congress, Senate, & other co-workers & employes. They all seemed very nice except for one woman who was really stuck up & I don't think that she voted for me!

Next we went to dinner at this really fancy Italian place. The spaghetti was delisious & it was really good to get to talk with my family.

Then I had a meeting with the Vice President to see what kind of goals we wanted to set for ourselves & for our country.

Lastly I got to tuck my kids into bed & then I got to go to bed. My Presidency is turning out to be great!

Paper 5

What a great day I had, long, but great! It started out with just getting used to the oval office, it sure is big! That chair I have is about the most comfortable chair ever made!

I couldn't do to much sitting because before I knew it I was signing every document known to man kind! My hand was so sore when I got done!

Next it was off to a press conference. I was asked everything from where were you born to what was you college degree. Thankfully I got to sit down after a while and watch the vice President get drilled with questions.

Then I went to meet Congress, Senate, & other co-workers & employes. They all seemed very nice except for one woman who was really stuck up & I don't think that she voted for me!

Next we went to dinner at this really fancy Italian place. The spaghetti was delisious & it was really good to get to talk with my family.

Then I had a meeting with the Vice President to see what kind of goals we wanted to set for ourselves & for our country.

Lastly I got to tuck my kids into bed & then I got to go to bed. My Presidency is turning out to be great!

Paper 6

It was my first official day being the president. I woke up early that day because I was extremely eager to begin my work.

I woke up in the most enormous bed I've ever laid eyes on. There were layes of royal blue silk sheets under a soft white down comforter. The deep red pillows supported my head and had helped me to enjoy a good nights' rest.

I hesitated before climbing out of bed, not wanting to leave my sense of eutopia. Eventually found myself making my way to the walk-in closet across the room. In it were countless pants, shirts, shoes, and ties that were all unique, so it wasnt a difficult decision.

I heard a knock on the door and call for them to come in. It was my maid. Yes, I had a maid! I couldnt believe it.

I sprang downstairs to the breakfast table as numerous people were awaiting to serve me. It was delicious.

After brushing my teeth and doing all of the other essentials, it was time for me to take charge.

My office was humungus and was covered, floor to ceiling with rows and rows of books. In front of gigantic windows, was my desk, where I sat for many hours of the day stressing out over papers I needed to sign and decisions I had to make. It wasnt as simple as I thought.

That night I had a dinner party to attend to with some important businessmen. Everything ran smoothly.

I returned home that night to my cozy bed, just in time for yet another good nights' sleep. Only to wake up and repeat it all tomorrow. What a life I live. :)

Scaffolded Formative Assessment

For the Facilitator

Make two packets for teachers. In the first packet, photocopy the *Congruent Task* and the six sample student responses. In this packet also include a copy of the PowerPoint handouts used in this module. For yourself, copy the *Congruent Task: Instructional Next Steps* onto an overhead transparency. Next, photocopy *Individual Performance Task 6* and the corresponding rubric and make a second packet for each teacher.

After viewing the video segment: "Scaffolded Formative Assessment," distribute the first packet of materials to teachers. This module models how teachers may use student responses for formative assessment purposes.

Steps:

1. Read the directions and review the item (shown on the cover sheet).
2. Ask teachers to review the six student responses. Then ask teachers to determine which students have made similar types of errors and group students by error types. Once the papers are in three groups, have the teachers respond to the questions on the cover sheet.
3. Next, read aloud assessment comments for each sample essay. You are modeling how to deconstruct the student responses by showing example responses.
4. Next, using the overhead projector lead teachers through the instructional next steps transparency. This serves as a model for the *Individual Performance Task 6*, and the second packet can be given to teachers after reviewing the model.

Commentary on sample 1:

This student is a high-scoring student who attempted to demonstrate a congruent figure through a flip but made a single error. Through the student's response he demonstrates that he understands that the congruent figures can be shown through a transformation, though the figure he drew differs from the stimulus in the placement of one block on the grid. The student needs to use more precise vocabulary to note that congruent means two figures are identical in size and shape. It should be noted that demonstrating congruent relationships through a rotation or flip is more difficult than demonstrating congruent relationships through a slide.

Commentary on sample 2:

This student is a high-scoring student who attempted to demonstrate a congruent figure through a rotation but made a single error. Through the student's response he demonstrates that he understands that the figures should be identical "like," though the figure he drew differs from the stimulus in the placement of one block on the grid. The student needs to use more precise mathematical vocabulary to note that congruent means two figures are identical in size and shape, the student should use his mathematics vocabulary instead of using the word "sideways." It should be noted that demonstrating congruent relationships through a rotation or flip is more difficult than demonstrating congruent relationships through a slide. The use of a transformation to demonstrate congruent relationships also requires the student to use spatial sense.

Commentary on sample 3:

This student is a low-scoring student. Through the student's response, the student shows he does not remember and understand the meaning of the term congruent.

Commentary on sample 4:

This student is a moderate-scoring student who correctly demonstrated a congruent figure to the stimulus through a slide without error. However, the student was not able to explain the mathematical attributes regarding what made the figure congruent. The student needs to be encouraged to use mathematical vocabulary when providing explanations.

Commentary on sample 5:

This student is a low-scoring student. Through the student's response, the student shows he does not remember and understand the meaning of the term congruent.

Commentary on sample 6:

This student is a moderate-scoring student who correctly demonstrated a congruent figure through a slide without error. However, the student was not able to explain the mathematical attributes regarding what made the figure congruent. The student needs to be encouraged to use mathematical vocabulary when providing explanations. Note the student explains that he believes congruent figures must be transformed. This is not the case and shows the student has a misconception.

Ask teachers to compare their ideas for re-teaching the students in each group: low scoring, moderate scoring, and high scoring. Brainstorm ideas for re-teaching students based upon the group in which they are categorized. Using an overhead projector, share follow up instructional suggestions.

Congruent Task

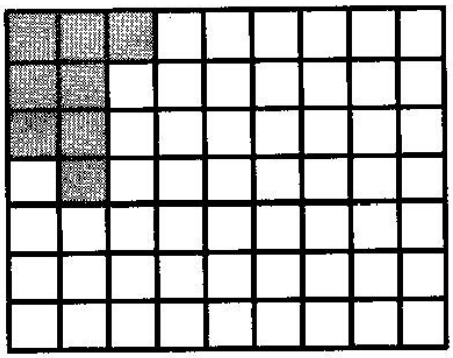
TEACHER DIRECTIONS:

Study the task below. Next, review the 6 student responses and separate the responses into 3 groups of papers in terms of what students know based upon their response. Analyze the three groups of papers and answer the following questions:

1. What do students in the lowest performing group know based upon their responses?
2. What do these lowest performing students need in terms of instructional next steps?
3. What do students in the middle performing group know based upon their responses?
4. What do these middle performing students need in terms of instructional next steps?
5. What do students in the highest performing group know based upon their responses?
6. What do these highest performing students need in terms of next instructional steps?

Item

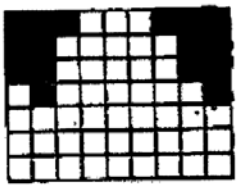
Draw a figure on the grid that is congruent to the shaded figure.



Explain why your figure is congruent to the one in the picture

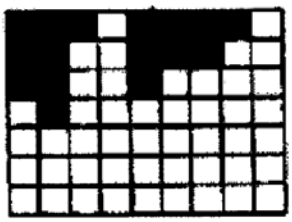
Sample 1

3M413/



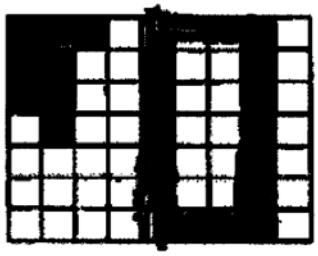
There are congruent
becausec they are the
same shape.

Sample 2



I did mine like the
one in the picture but
mine is side ways.

Sample 3



it is a uteglu

Sample 4

I looked at
it very carfaly

Sample 5

It is a fantgan when you tune it
up Sideduun it is the same.

Sample 6

My figure is congruent to the in the picture
because I had to do what is on the paper.
Your supose to turn it anyway

Congruent Task:
Instructional Next Steps

5-4.3 Classify shapes as congruent.

Cognitive Level: This standard is at the understand level in Anderson and Krathwohl's (eds) *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives.* Interested readers should refer to page 75 in the text.

The standard notes that students should classify shapes as congruent. The most direct summative measure of this standard is to show different sets of figures and to ask students to identify which set shows two congruent figures. However, from a formative assessment perspective, such a task does not help a teacher specifically identify the student's misconception(s). As noted in the sample student responses, students consistently have trouble explaining what mathematical properties are required to make two figures congruent. For formative purposes, asking students to exemplify and explain the term congruent targets the cognitive level at the understand level, while providing useful information to inform instruction.

Low Scoring Students: Students who fall into this category do not understand that the word congruent means one figure is the same size and same shape (equal sides and angles) to another, even though it is in a different location or shown through a transformation. In re-teaching you could:

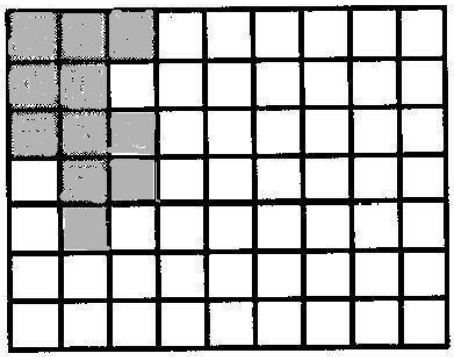
- Review what the term congruent means.
- Give students opportunities to overlay different sets of figures that are the same or different to test whether or not two figures are congruent.
- Give students opportunities to create congruent figures (both regular and irregular figures) on grid paper.
- Give students opportunities to test whether figures are congruent by using a ruler and protractor when grid paper is not present.
- Teach students the difference between reflections and rotation. Transformed shapes may look different, but the properties are the same.
- Have students generate explanations describing how figures are congruent using mathematical terminology.

Moderate Scoring Students: Students who fall into this category understand one way to show congruent figures (side-by-side), but may not be able to visualize or articulate that a congruent figure may be a transformation of an original figure. Teachers should praise the correct side-by-side presentation and then ask students to show a different way that a figure could be congruent to the stimulus. The goal is to determine if students are able to demonstrate that a transformation of the figure also means the figure is congruent. These students also must generate explanations describing how figures are congruent using mathematical terminology. For example, asking students to explain congruency in two different ways may be helpful. In addition, asking students to find where they can replace vernacular terms with the correct mathematical terms is a good corrective approach.

High scoring students: These students have a good understanding of congruence and are generally able to explain what congruence means. These students may be asked to locate what makes a figure incorrect and to correct it independently. These students might trade papers to determine a single error in peer's work by comparing the angles, side lengths, and perimeters of the congruent shapes. In addition, asking these students to find replacements for vernacular terms through an explanation of the correct mathematical terms is a good corrective approach.

Each group of students should correct and resubmit work on the original task. Once students have had opportunities to address specific misconceptions and have successfully revised and resubmitted their first tasks, students are ready to receive the follow-up parallel task to determine mastery.

Draw a figure on the grid that is congruent to the shaded figure.



Explain why your figure is congruent to the one in the picture

Individual Performance Task 6:
Developing a Scaffolded Formative Assessment

In this assignment use the performance task you developed for the rubric module as the basis for this task. Then, administer the task to students. Next, analyze and group student responses to diagnose student misconceptions or confusions. Then develop and implement instructional next steps by developing a parallel performance task to determine if students have improved achievement based upon your learning target.

- ☐ Collect the student responses to the performance task you developed in the rubric module. Your rubric describes the range of student responses. Study the student responses to diagnose student misconceptions or confusions.
- ☐ Review one class's individual student responses and place each response into one of three groups based upon similarity of student errors.
- ☐ Once the papers are in three groups, review the papers to determine what students know and do not know. What caused the errors you observe?
- ☐ Write down your conclusions about what each group of students is able to do and what students do not understand. Next, describe what students in each group should do next (e.g., what instructional next steps are appropriate) in order to meet the learning target.
- ☐ Develop a different, parallel performance task to administer to students after they receive follow-up instruction to target misconceptions.
- ☐ Implement your group-based, instructional next steps targeting the misconception observed in the group. Then give your students new performance tasks.
- ☐ Write a one-page reflection centered in these three questions. (1) After administering the first performance task to your students, reviewing responses and grouping students, what did you learn about what students understand and do not understand based upon the three groups you identified? (2) How did grouping students by misconceptions shape your instructional next steps? (3) How did student performance change from original performance task to the follow-up performance task?
- ☐ Your reflection will be graded on the basis of the depth of your thinking, your discussion of the questions, and on the quality of the parallel performance task. Attach to your reflection the two performance tasks, samples of student work from each group that you collected, the conclusions you drew based upon this work, and a summary of the instructional next steps implemented for each group. Use the exemplars provided in the videos and during the module discussion as examples to guide your work.

Rubric for Individual Performance Task 6: Developing a Scaffolded Performance Task

Name: _____

Criteria	**Scale**				**Score**
	0	**1**	**2**	**3**	
Reflection	*No* discussion of instruction information	Issues related to instruction formulated and *somewhat* articulated	Issues related to instruction *fully* formulated and *clearly* articulated		
Student directions	Not provided	Directions implicit in task description but not explicitly written for students	Directions written for students but unclear in some aspects or not appropriate for the grade level	Directions, including criteria for assessment, clearly written for students and appropriate for the grade level	
Newman, Bryk, & Nagaoka. (2001) performance task standards	The task does not meet the standards	The task meets Standard 1	The task meets Standards 1 and 2	The task meets all the standards	
Long-term memory	The task does not require students to retrieve information from.	The task requires that students retrieve information from long-term memory.			
Rubric	Not provided	Some elements missing from rubric or criteria not based on targeted state indictors, or language from the indicators not used	Only minor faults in rubric or criteria based only *somewhat* on targeted state indictors and only *some* language from the indicators used	Clear rubric delineating levels of performance based on targeted state indictors and using language from the indicators	

Developing Multiple-Choice Items

For the Facilitator

This module is divided into two sessions. For session 1 make a packet of the *Investigating Multiple-Choice Items for Standards Alignment and Cognitive Levels* cover sheet, the eight sample items, and the module PowerPoint. For session 2 make a packet of *Individual Performance Task 7* and the corresponding rubric. After the teachers have viewed the video segment "Developing Multiple-Choice Items for Classroom Assessment", distribute packet 1 and have the teachers spend about 45 minutes individually analyzing the eight sample items in terms of the item-writing guidelines covered in the video segment. Teachers who are in content areas other than mathematics or English language arts should be able to review the items for cognitive alignment issues and for potential formatting issues. When the 45 minutes are up, lead a discussion about the sample items. Use the provided answers as a guide.

In the subsequent session, hand out the second packet and three overhead transparencies to each group. Divide the teachers into content groups and have them work for an hour and a half. Ask each group to develop three multiple-choice items, with one of the items being an interpretive exercise using the directions for *Individual Performance Task 7* as a guide. Then have each content group use an overhead projector to present their three items to the group as a whole. As with other forms of assessment, the primary focal point should be alignment of the assessment with the cognitive level and the content of the state standard.

Stress the importance of this fact:

Teachers should incorporate the technical language that is used in the state standards for their particular content area whenever it is appropriate to do so—for example, in English language arts, using the term *genre* instead of saying "what type of work."

As each group presents the three multiple-choice items developed by members, the group as a whole should be charged with verbalizing which item-writing guidelines were followed in the construction as well as which guidelines may have been overlooked. Teachers should also discuss the Bloom's taxonomy level and provide a justification for their choices.

For homework, teachers should plan to develop items to use on a test administered to their students. Explain that the homework assignment—to develop the five items and the corresponding interpretive material—will take two hours to complete and should be turned in at the next session for scoring. You will use the *Rubric for Individual Performance Task 7* to score each teacher's work.

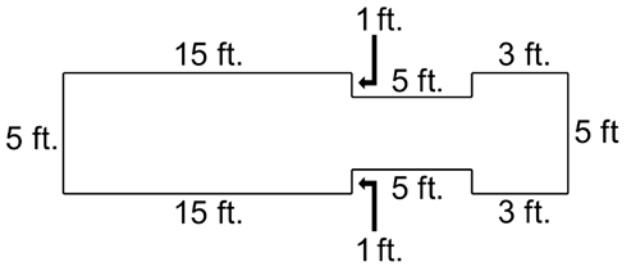
COVER SHEET: Investigating Multiple-Choice Items for Indicator Alignment and Cognitive Levels

Study each item and then answer the item-writing questions that follow it. Once you have completed your analysis of the ten items, your facilitator will share scoring information.

Item 1

6-5.4 Apply strategies and procedures to estimate the perimeters and areas of irregular shapes.

Study the figure.



John's garden is pictured above. What is the area of his garden?

A. 29 sq. ft. (add all the visible numbers)
B. 60 sq. ft. (perimeter)
C. 105 sq. ft. (correct)
D. 115 sq. ft. (23 x 5—top row of numbers x side number)
E. 225 sq. ft. (15 x 5 x 3 x1—different numbers)

What cognitive skill(s) must students use to answer this question correctly?

Is this item aligned with the indicator? Why or why not?

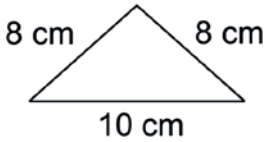
Were all item-writing guidelines followed? If not, how could you fix the item?

Do you notice any other issues?

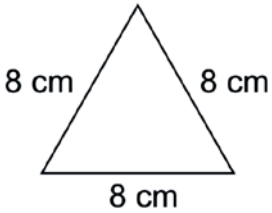
Item 2

3-4.5 Classify triangles by the length of their sides as either scalene, isosceles, or equilateral and by the size of their angles as either acute, obtuse, or right.

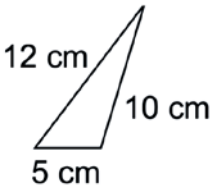
Which figure is a scalene triangle?

A. 

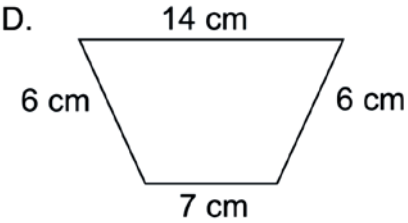
(isosceles triangle—another choice for classifying triangles by sides)

B. 

(equilateral triangle—another choice for classifying triangles by sides)

C. 

(scalene triangle—correct answer)

D. 

(not a triangle)

What cognitive skills must students use to answer this question correctly?

Is this item aligned with the indicator? Why or why not?

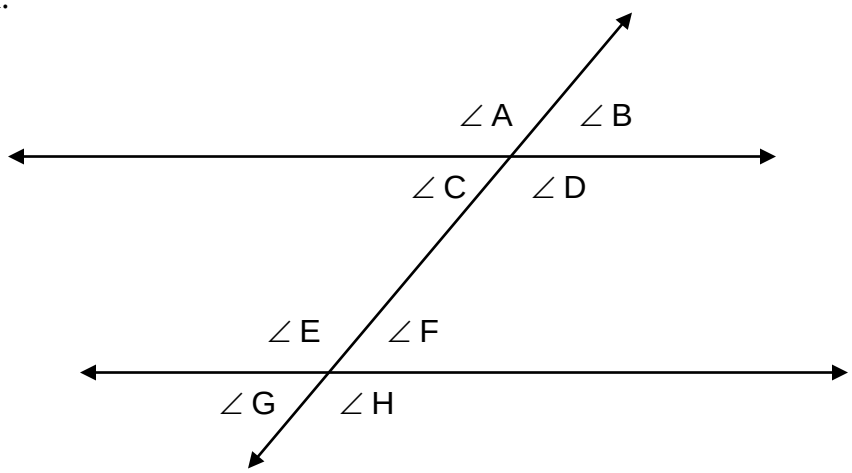
Were all item-writing guidelines followed? If not, how could you fix the item?

Do you notice any other issues?

Item 3

7-4.5 Analyze the congruent and supplementary relationships—specifically, alternate interior, alternate exterior, corresponding, and adjacent—of the angles formed by parallel lines and a transversal.

Study the model.



Which angle is congruent to ∠D?

A. ∠B (supplemental)
B. ∠C (supplemental)
C. ∠G (congruent to a supplemental)
D. ∠E (correct)

What cognitive skills must students use to answer this question correctly?

Is this item aligned with the indicator? Why or why not?

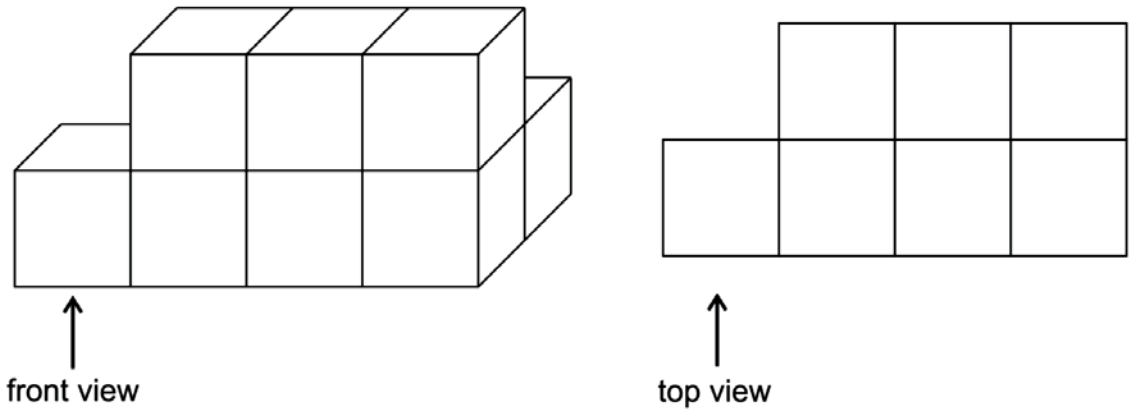
Were all item-writing guidelines followed? If not, how could you fix the item?

Do you notice any other issues?

Item 4

8-5.2 Explain the effect on the area of two-dimensional shapes and on the volume of three-dimensional shapes when one or more of the dimensions are changed.

Study the figures.



The figures above show two views of a three-dimensional figure. How will the surface area change when the cube on the far left bottom row is removed?

A. The surface area would decrease by 1 square unit. (one cube)
B. The surface area would decrease by 2 square units. (sides visible)
C. The surface area would decrease by 4 square units. (correct)
D. The surface area would decrease by 5 square units. (faces showing out)
E. The surface area would decrease by 6 square units. (faces on one cube)

What cognitive skills must students use to answer this question correctly?

Is this item aligned with the indicator? Why or why not?

Were all item-writing guidelines followed? If not, how could you fix the item?

Do you notice any other issues?

The multiple-choice items that appear in this section are based on a grade four reading text taken from the Web site of the National Center for Education Statistics, United States Department of Education, at http://nces.ed.gov/nationsreportcard/itmrls

The River

Based on a true story

By Yetti Frenkel

"Sh," whispered Elisa. "I think she's coming!"

Elisa and Cory stifled their giggles and crouched behind the pine tree. Peeping out through the snow-covered branches, the children held their breaths and listened for the tinkle of Minnie's collar as the old dog tried to find their hiding place. It was usually the hound's favorite game, but today the only sounds the children heard were winds whistling softly across the frozen snow and ice cracking on the river.

Cory shivered with cold. "I wonder where she is," he said. "I hope she isn't off chasing a deer."

Elisa snorted. "Minnie's too lame for that. I bet she went home to wait where it's nice and warm."

Cory looked doubtful. "She wouldn't go home without us," he said. "Maybe she got ahead, and we didn't notice. Let's go to the bridge and see if she's there."

They started down the trail at a quick pace, glad to be moving again. The bare branches of the trees rattled forlornly as they tramped through the frozen snow.

Elisa struggled hard to keep up with her older brother. "Wouldn't it be easier to walk on the ice on the river?" she called to him.

Cory slowed his pace and waited for her to catch up. "It's too dangerous," he said. "The water is still flowing underneath, and the ice is thin. We might fall through." He held out a mittened hand. "I'll help you."

"No, thanks," said Elisa stubbornly. "I can keep up." But she was secretly glad when Cory walked beside her until they reached the bridge.

The old wooden bridge spanned the widest part of the river. In summer they often came here to fish or lie in the sun, but now it was a desolate, wind-swept place. They could hear the water gurgling softly beneath the ice as they looked out over the railing, hoping to glimpse Minnie walking along the bank.

Cory cupped his hands to his mouth and called, "Minnie, Min-nie!" His voice echoed back to him from the lonely woods. "I don't see her, Elisa. Do you?" he asked.

Just then Elisa gave a startled cry, and Cory turned sharply to see Minnie ten feet from shore. The old dog had fallen through the ice and was paddling in desperate circles.

“Hang on, Minnie, I’m coming!” Cory cried, racing toward the river. Elisa was already ahead of him, pulling off her coat, scarf, and mittens, ready to plunge in and save her dog. Blinded by tears, she stumbled out onto the ice.

Cory caught up with her and pulled her back. “Do you want to drown yourself?” he shouted. His face was white as he held out the warm clothes she’d dropped. “Put these back on and let me think of something.” He looked grimly at the river.

Elisa sobbed as she struggled into her coat. “You can save her, can’t you, Cory? She won’t die, will she?”

“Of course not,” he said, wishing he felt as confident as he was trying to sound.

The sight of her masters had given Minnie new hope, and she managed to get her front paws up on the ice. She scratched and clawed frantically at the slippery surface, but her hind legs were too arthritic to be of much help. For a moment her frightened brown eyes met Cory’s, then she slipped back into the icy water and began wearily swimming once more.

Cory searched the bank until he found a long, twisted branch. Holding it firmly, he maneuvered the end until he had it hooked under Minnie’s collar. “C’mon, girl,” he said to the tired dog. She heaved her front paws onto the ice and struggled desperately while he tried to help her by pulling on the branch. But frost and moisture had made the wood brittle, and it snapped almost immediately. Once more Minnie struck out swimming, but now her head was barely above the surface of the water.

A terrible thought crossed Cory’s mind - Minnie was going to drown before their eyes. It’s not fair, he thought. Why doesn’t someone come along to help us? He scanned the woods for a game warden or hunter, but saw no one. The woods were dark and silent, waiting. “I don’t know what to do,” he said, frightened.

“I know what to do,” cried Elisa. “I’m going to help her!”

Once again Cory grabbed his sister’s arm to prevent her from going out onto the ice. She bit and kicked at him like a small fury as tears of frustration ran down her cheeks.

“Listen to me!” yelled Cory. “I thought of something, but I need your help.” Elisa wiped the tears from her face. “I’m going to lie down on the ice and try to crawl to Minnie. You lie down behind me and hold my ankles. Don’t let go, no matter what, and don’t stand up. Understand?” Elisa nodded, sniffling.

Cory lay on the ice so that his weight would be distributed more evenly and there would be less chance of breaking through. He felt Elisa’s hands close around his ankles. As he inched his way forward, he could hear the water rushing beneath the ice. A few feet in front of him was the deep green hole where the dog had broken through. Cory’s heart pounded with fear, but he bit his lip

and kept going. At last he reached the edge of the hole and threw his arms around Minnie's neck. It felt reassuring to have a hold on her, but he soon realized that there was little else he could do. The ice was slippery, and every time he tried to pull her out, he began to slide forward himself.

"Have you got her?" called Elisa anxiously.

"Yes," Cory yelled over his shoulder, "but I can't" - Before he could explain, he found himself being pulled back across the ice with Minnie in his arms. He looked around in amazement, expecting to see a big man with a broad grin standing behind him, but there was only his sturdy little sister, laughing and crawling over the ice to throw her arms around the shivering dog. "How did you ever do that?" cried Cory. "You're not that strong!" Then as Minnie, tail wagging wildly, began to lick his face, he saw what had happened.

Elisa had put her wool coat down on the ice to protect her from the cold. The warmth of her body lying on the top of it had made the wool fibers stick firmly to the ice so that when she pulled on Cory's legs, he slipped across the surface to her as easily as a cork popping from a bottle.

Cory grinned in admiration. "You sure are one smart little sister!" he said, tousling her hair. He took off his plaid shirt and dried Minnie with it. "It's a good thing we were all together today," he said to the old dog softly as he rubbed her lopsided ears. She wagged her tail in agreement, and the three hurried toward the warmth of home without looking back.

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Item 5

6-1.3 Interpret devices of figurative language (including simile, metaphor, personification, and hyperbole) and sound devices (including onomatopoeia and alliteration).

Which statement from the story contains personification?

A. Peeping out through the snow-covered branches, the children held their breaths. (student read the statement to be that the branches are peeping)
B. They trampled through the frozen snow. (student did not remember that personification is the giving of human qualities to an inanimate object, an abstraction, or an animal)
C. She wagged her tail in agreement. (correct—the dog is personified as possessing the human understanding that allows her to feel and express agreement)
D. The old wooden bridge spanned the widest part of the river (student remembered only that personification is related to inanimate objects)

What cognitive skills must students use to answer this question correctly?

Is this item aligned with the indicator? Why or why not?

Were all item-writing guidelines followed? If not, how could you fix the item?

Do you notice any other issues?

Item 6

7-1.1 Analyze literary texts to draw conclusions and make inferences.

Elisa brings Corey and Minnie back across the ice:

A. by asking a big man for help (Cory expects to see a big man with a grin)
B. by having Corey slide himself forward (Cory slides forward to Minnie)
C. by laying her warm coat on the ice (correct—the wool fibers stick to the ice)
D. by giving Corey a branch to hold (Cory uses the branch to try to hook Minnie)

What cognitive skills must students use to answer this question correctly?

Is this item aligned with the indicator? Why or why not?

Were all item-writing guidelines followed? If not, how could you fix the item?

Do you notice any other issues?

Item 7

7-3.1 Use context clues such as those that provide an example, a definition, a restatement, or a comparison/contrast to generate the meanings of unfamiliar and multiple-meaning words.

Use the dictionary entry to answer this question.

bank pronunciation: ba[ng]k function: *noun* 1: a mound, pile, or ridge raised above the surrounding level 2: the rising ground bordering a lake, river, or sea 3: a steep slope; the lateral inward tilt of a surface along a curve or of a vehicle (as an airplane) when taking a curve 4: a protective or cushioning rim or piece

As the word is used in the following sentence, which definition of "bank" is correct?

"They could hear the water gurgling softly beneath the ice as they looked out over the railing, hoping to glimpse Minnie walking along the bank."

A. Definition 1
B. Definition 2
C. Definition 3
D. Definition 4

What cognitive skills must students use to answer this question correctly?

Is this item aligned with the indicator? Why or why not?

Were all item-writing guidelines followed? If not, how could you fix the item?

Do you notice any other issues?

Item 8

5-1.8 Analyze works of fiction (including legends and myths) and works of nonfiction (including speeches and personal essays) by characteristics.

What genre is “The River”?

A. “The River” is a drama. (another literary genre)
B. “The River” is fiction. (correct)
C. “The River” is nonfiction. (the genre of informational texts)
D. “The River” is poetry. (another literary genre)

What cognitive skills must students use to answer this question correctly?

Is this item aligned with the indicator? Why or why not?

Were all item-writing guidelines followed? If not, how could you fix the item?

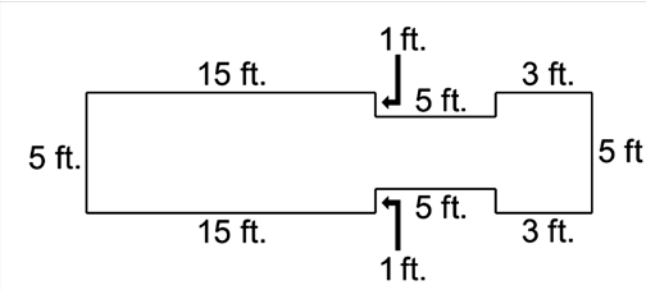
Do you notice any other issues?

Investigating Multiple-Choice Items for Standards Alignment and Cognitive Levels: Office of Assessment Answers

Item 1

6-5.4 Apply strategies and procedures to estimate the perimeters and areas of irregular shapes.

Study the figure.



John's garden is pictured above. What is the area of his garden?

A. 29 sq. ft. (add all the visible numbers)
B. 60 sq. ft. (perimeter)
C. 105 sq. ft. (correct)
D. 115 sq. ft. (23 x 5—top row of numbers x side number)
E. 225 sq. ft. (15 x 5 x 3 x1—different numbers)

What cognitive skill(s) must students use to answer this question correctly?

Students must divide the irregular figure into three rectangles. Next, students must use the area formula for rectangles, compute the area for each rectangle, and then add the three areas together. This question requires application.

Is this item aligned with the indicator? Why or why not?

This item is directly aligned with the indicator because students have to apply a strategy or procedure in order to find the area of the irregular shape. Ideally, even with this multiple-choice item, students should show what strategies they used to answer the problem in the classroom. Students should be encouraged to mark on the stimulus to help solve the problem.

Were all item-writing guidelines followed? If not, how could you fix the item?

Basic item-writing guidelines have been followed. The figure, however, should be centered. Rather than have the text "Study the figure" above the graphic, the reading burden could be reduced if the context "John's garden . . ." is placed above the graphic and the question is below the graphic.

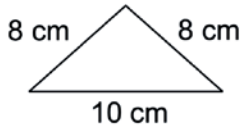
Do you notice any other issues?

Although the second and third rectangles have the same areas, visually these areas are not the same—something that may confuse students.

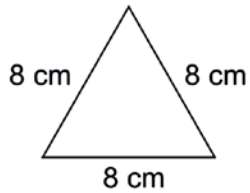
Item 2

3-4.5 Classify triangles by the length of their sides as either scalene, isosceles, or equilateral and by the size of their angles as either acute, obtuse, or right.

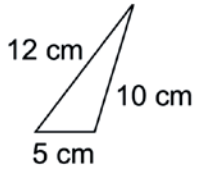
Which figure is a scalene triangle?

A. 

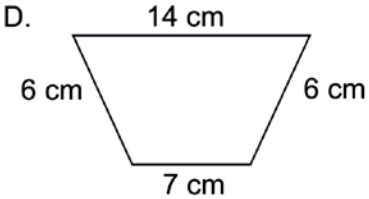
(isosceles triangle—another choice for classifying triangles by sides)

B. 

(equilateral triangle—another choice for classifying triangles by sides)

C. 

(scalene triangle—correct answer)

D. 

(not a triangle)

What cognitive skills must students use to answer this question correctly?

Students must know the attributes of a scalene triangle in order to identify the correct figure. This is a remember question because students are selecting the correct figure based on recall of its attributes in familiar presentation.

Is this item aligned with the indicator? Why or why not?

This question is aligned with the indicator because students are selecting a triangle based on memorized attributes. To meet the indicator —as a constructed-response—a teacher might provide the attributes and ask students to draw the triangle. For example – Draw a triangle with one 90° angle and two 45° angles. What type of triangle have you drawn?

Were all item-writing guidelines followed? If not, how could you fix the item?

Although each figure is on its own line, option D is an implausible distractor. It is not always necessary to have four options.

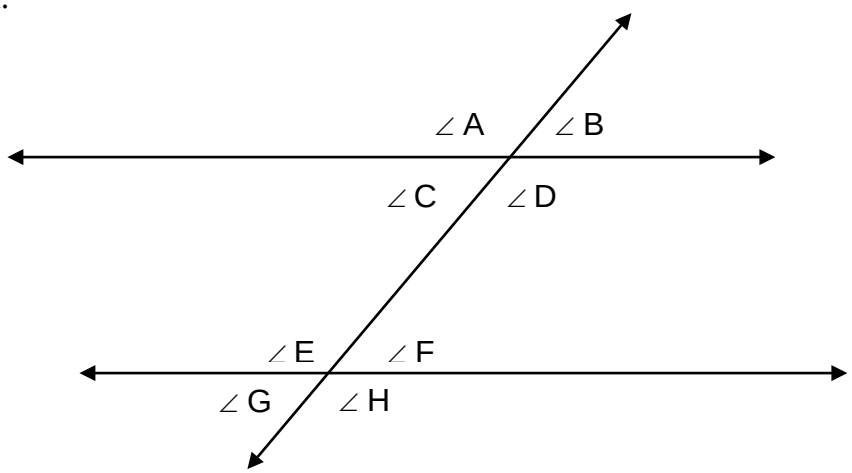
Do you notice any other issues?

The 8-centimeter measure is not consistent from figure to figure. The figures should be drawn using the same proportions.

Item 3

7.4.5 Analyze the congruent and supplementary relationships—specifically, alternate interior, alternate exterior, corresponding, and adjacent—of the angles formed by parallel lines and a transversal.

Study the model.



Which angle is congruent to ∠ D?

A. ∠ B (supplemental)
B. ∠ C (supplemental)
C. ∠ G (congruent to a supplemental)
D. ∠ E (correct)

What cognitive skills must students use to answer this question correctly?

A student must understand both congruent and supplementary relationships in order to answer this item correctly and identify these relationships visually in a new model. Likely, this presentation of a model is similar in nature to other models that the student has seen during instruction. For this reason, this item is at the application level.

Is this item aligned with the indicator? Why or why not?

This item is aligned with the indicator because students are working with the congruent relationships of angles.

Were all item-writing guidelines followed? If not, how could you fix the item?

Although the model is centered and the question is short, the options are not in a logical order.

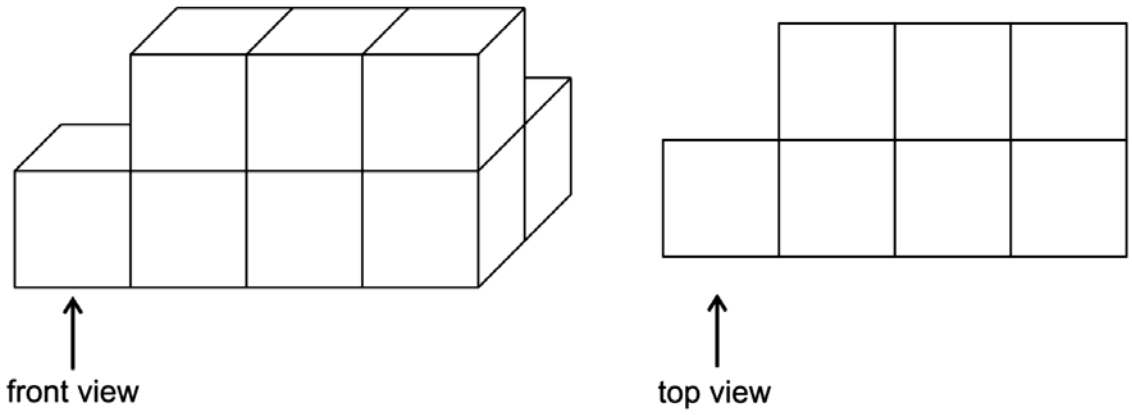
Do you notice any other issues?

No.

Item 4

8-5.2 Explain the effect on the area of two-dimensional shapes and on the volume of three-dimensional shapes when one or more of the dimensions are changed.

Study the figures.



The figures above show two views of a three-dimensional figure. How will the surface area change when the cube on the far left bottom row is removed?

A. The surface area would decrease by 1 square unit. (one cube)
B. The surface area would decrease by 2 square units. (sides visible)
C. The surface area would decrease by 4 square units. (correct)
D. The surface area would decrease by 5 square units. (faces showing out)
E. The surface area would decrease by 6 square units. (faces on one cube)

What cognitive skills must students use to answer this question correctly?

Three-dimensional objects require that students use spatial sense. This item is at the analysis level because students have to think about sides that are unseen in a new, unfamiliar model.

Is this item aligned with the indicator? Why or why not?

The item is not aligned because students are determining the change in surface area of a three-dimensional shape rather than area of a two dimensional shape.

Were all item-writing guidelines followed? If not, how could you fix the item?

No, the options have repetitive language. The phrase “The surface area would decrease” could be incorporated into the stem this way:

In the figure above, by how many units would the surface area decrease if the cube on the far left bottom row were removed?

A. 1 square unit
B. 2 square units
C. 4 square units
D. 5 square units
E. 6 square units

Do you notice any other issues?

No

Item 5

6-1.3 Interpret devices of figurative language (including simile, metaphor, personification, and hyperbole) and sound devices (including onomatopoeia and alliteration).

Which statement from the story contains personification?

A. Peeping out through the snow-covered branches, the children held their breaths. (student read the statement to be that the branches are peeping)
B. They trampled through the frozen snow. (student did not remember that personification is the giving of human qualities to an inanimate object, an abstraction, or an animal)
C. She wagged her tail in agreement. (correct—the dog is personified as possessing the human understanding that allows her to feel and express agreement)
D. The old wooden bridge spanned the widest part of the river. (student remembered only that personification is related to inanimate objects)

What cognitive skills must students use to answer this question correctly?

Students must understand personification, and apply that understanding to determine which sentence contains an example of personification. This question is at the analysis level.

Is this item aligned with the indicator? Why or why not?

No, the indicator stipulates that students should interpret devices of figurative language. Finding an example of figurative language is a grade 2 indicator. The focus for this indicator is interpreting the meaning of figurative language. Students should determine why the author chose to personify the dog's tail wagging.

Were all item-writing guidelines followed? If not, how could you fix the item?

No, the options are not in a logical order. They could be ordered from short to long, long to short, or ordered in the sequence presented in the text.

Do you notice any other issues?

Distractors are described in parenthesis. Obviously, students would see the items without the rationales; however, describing the source of the distractors is an essential element of implementing item-writing guidelines. The rationale of the distractors could be improved if the author noted that each option is found in the text.

Item 6

7-1.1 Analyze literary texts to draw conclusions and make inferences.

Elisa brings Corey and Minnie back across the ice:

A. by asking a big man for help (Cory expects to see a big man with a grin).
B. by having Corey slide himself forward (Cory slides forward to Minnie).
C. by laying her warm coat on the ice (correct—the wool fibers stick to the ice).
D. by giving Corey a branch to hold (Cory uses the branch to try to hook Minnie).

What cognitive skills must students use to answer this question correctly?

Students either must remember the detail from the story or must refer to the appropriate section of the text to locate the answer. Because the information is explicitly stated in the text, students are working at the understand level.

Is this item aligned with the indicator? Why or why not?

Because the information is explicitly stated in the text, students are not drawing a conclusion or making an inference. Rather, the question calls for students to locate a detail in the text. This question is not aligned with the stipulated indicator.

Were all item-writing guidelines followed? If not, how could you fix the item?

No, multiple-choice items should always demonstrate correct grammar. In this example, the use of the colon violates the rules of punctuation. This item could easily be turned into a question: "How does Elisa bring Corey and Minnie back across the ice?" If the stem is phrased as a question, the options may remain as they are. If the author chooses to keep the incomplete-stem format (in which case the colon is removed from the stem), a period should be placed at the end of each option. In this way, the incomplete statement joined with an option forms a complete sentence.

Do you notice any other issues?

No.

Item 7

7-3.1 Use context clues such as those that provide an example, a definition, a restatement, or a comparison/contrast to generate the meanings of unfamiliar and multiple-meaning words.

Use the dictionary entry to answer this question.

bank pronunciation: ba[ng]k function: *noun* 1: a mound, pile, or ridge raised above the surrounding level 2: the rising ground bordering a lake, river, or sea 3: a steep slope; the lateral inward tilt of a surface along a curve or of a vehicle (as an airplane) when taking a curve 4: a protective or cushioning rim or piece

As the word is used in the following sentence, which definition of "bank" is correct?

"They could hear the water gurgling softly beneath the ice as they looked out over the railing, hoping to glimpse Minnie walking along the bank."

A. Definition 1 (another definition of the noun "bank")
B. Definition 2 (correct)
C. Definition 3 (another definition of the noun "bank")
D. Definition 4 (another definition of the noun "bank")

What cognitive skills must students use to answer this question correctly?

Students must analyze the context of the multiple-meaning word to determine its meaning.

Is this item aligned with the indicator? Why or why not?

Because students are using context clues to determine the meaning of a multiple-meaning word, this item is aligned to the indicator, though by grade 7 students would be expected to be familiar with this word.

Were all item-writing guidelines followed? If not, how could you fix the item?

The option order should be either short to long or long to short.

Do you notice any other issues?

No.

Item 8

5-1.8 Analyze works of fiction (including legends and myths) and works of nonfiction (including speeches and personal essays) by characteristics.

What genre is “The River”?

A. “The River” is a drama. (another literary genre)
B. “The River” is fiction. (correct)
C. “The River” is nonfiction. (the genre of informational texts)
D. “The River” is poetry. (another literary genre)

What cognitive skills must students use to answer this question correctly?

Students must read the story and determine that it is a piece of fiction rather than an informational text. This thinking process is at the understand level.

Is this item aligned with the indicator? Why or why not?

The standard’s intent is that students provide examples of the defining characteristics of the text types rather than classifying the text based upon its characteristics. To be perfectly aligned to the indicator, a constructed-response item would be best. However, this question can be considered an indirect measure of this standard because a teacher would expect a student who makes the correct classification to have made the determination based upon the text characteristics.

Were all item-writing guidelines followed? If not, how could you fix the item?

No, each option contains repetitive language. The options should be drama, fiction, nonfiction, and poetry.

Do you notice any other issues?

No.

Individual Performance Task 7:
Developing Multiple-Choice Items

- ☐ Identify the indicators to test in a class in the next two to three weeks. Use these standards to create multiple-choice items for the test.
- ☐ Write down each number and text of the indicator and determine how many items are needed to measure student achievement of that particular standard. This practice is appropriate for the content areas of mathematics, science, and social studies. For English language arts, base the items on a piece of rich text—either a two- to three-page prose passage (literary or informational) or a piece of poetry—that is unfamiliar to students. In the text chosen, identify areas in which standards-based questions may be developed.
- ☐ Add directions indicating how the students are to respond to each item. For example, should students circle the correct answer? Specify the point value of each item.
- ☐ Locate the directions for use above the stimulus material. The question should be placed after the stimulus material, just above the item options. The item number should be placed with the stem and options. Format stimulus material (a prose passage or a graph, for example) with appropriate interpretive directions and follow with corresponding items.
- ☐ When the item requires an interpretive exercise (a table or a graphic, for example), make sure to center the stimulus material.
- ☐ Create a minimum of five original multiple-choice test items. Most of the items must be interpretive exercises in order to meet the cognitive levels of the standards. These five items do not have to measure seven different standards.
- ☐ Apply the item-writing guidelines in the creation of the multiple-choice items. Describe the item-writing guidelines that you used to create the items.
- ☐ After each distractor, explain why that particular distractor is plausible to students who have only partial understanding of the content. Review the eight sample items for sample distractor rationales. Highlight correct answers.
- ☐ Below each item, write two or three sentences that answer these two questions:

  (1) Which cognitive level (or levels) will students use in solving the problem?
  (2) Why is the item at that particular cognitive level (or those particular levels)?

- ☐ Use the rubric to evaluate the multiple-choice items prior to submitting the work for a grade. Attach the rubric to the assignment when submitting the completed task.
- ☐ After submitting the work, format a second version of the test for students by removing the standards, the discussion, the distractor rationales, and key information. Administer the revised version of the test to students at an appropriate time after your classroom instruction of the content.

Rubric for Individual Performance Task 7:
Developing Multiple-Choice Items

Name: _____

Criteria	Scale			Score
	0	**1**	**2**	
Test directions	No test directions provided	Test directions provided but point values of items not present, or test directions not provided but point values of items present	Test directions and point values of items present	
Directions for interpretive exercises	No directions provided	Student directions not present for all interpretive exercises or not in the correct location	Student directions present for each interpretive exercise and in the correct location	
Item-writing guidelines	No application of item-writing guidelines	Application of *some* item-writing guidelines	Application of *many* item-writing guidelines	
Interpretive exercises	No interpretive exercises present	Interpretive exercises present but stimulus not required to answer items	Interpretive exercises requiring students to interpret stimulus (e.g., graphics, or scenario) to answer items	
Thinking skills (cognitive levels)	Incorrect application and discussion of cognitive levels	Correct application and discussion of *some* cognitive levels	Correct application and discussion of *many* cognitive levels	
Justification for distractors	Distractors not based on common mistakes	*Some* distractors based on common mistakes	*Many* distractors based on common mistakes	
Standard alignment	Items aligned with lower grade-level standards or not aligned with any South Carolina standards	Items aligned with the standard content but *not* aligned with the standard cognitive level or some items aligned with both the standard content and the standard cognitive level	Items aligned *both* with the standard content *and* with the standard cognitive level	

Planning Effective Feedback and Classroom Questioning

For the Facilitator

Photocopy the following materials and make a packet of them for each teacher: the *Investigating What Makes Feedback Effective* cover sheet, the student response, and the seven samples of teacher feedback to the response. Also be sure to photocopy and provide the PowerPoint presentation for the module, *Individual Performance Task 8*, and the corresponding rubric. At the end of this module, because it is shorter in length, your teachers will also view the video segment, "The Use and Interpretation of Test Scores."

Sadler (1989), one of the early thinkers about formative assessment noted that feedback is effective when it identifies the gap between what is understood and the learning target. When students do not have partial understanding of the learning target, feedback techniques are not effective. These students need to be re-taught the material from the beginning. But for students who have partial knowledge, providing feedback can help them recognize and correct their misconception or confusion in regard to the learning target.

Research by Hattie and Timperley (2007) indicates that effective feedback provides the student information on how to move towards mastering the learning target. It is specific to the processes required to solve a problem and does not address variables extraneous to the learning target (e.g., correct spelling or neatness when answering a social studies question). Teachers can provide follow-up directions about finding information on correcting an answer or asking students to provide more details on a particular topic. Such feedback is considered corrective.

Feedback can also address the processes required to solve a task. When teachers use process-based feedback, they may remind the student of the grading criteria the student may not have addressed or processes previously demonstrated in class. The teacher asks the student to connect the criteria or processes to the student's own work. Finally, effective feedback can also be used to encourage students to engage in self-regulation. Teachers use self-regulated feedback to help the student evaluate his or her own work and find his or her own errors. Students who are high performing are likely best served by self-regulated feedback or process-based feedback. Students who have larger gaps between what they understand and the learning target would likely do well with corrective feedback. With corrective, process-based or self-regulated feedback, it is important to stipulate that the student should revise his work and resubmit.

Distribute the packet of materials you created to all the teachers after they have viewed the video segment: "Planning Effective Feedback and Classroom Questioning." In this module, you will be analyzing teacher feedback so that teachers may better understand the qualities of feedback that are important.

Steps:

1. Read the cover sheet directions and the feedback rubric to teachers.
2. Ask teachers to review the student's work and provide feedback to the student. Next, have teachers review the seven different samples of teacher feedback. Teachers should rate the quality of the feedback samples using the feedback rubric and then edit to make the samples highly effective.
3. Next, read the commentary for each sample. Model how to deconstruct the learning target (high quality feedback) by reviewing example responses.
4. Finally, have them revise the feedback developed for this student.

Commentary on sample 1:

Not Effective – The teacher provides general corrective feedback without asking the student to close the loop between performance and the learning target. To improve the teacher's feedback revise the feedback as follows, "Review the definition of congruent using your textbook. Next, review and correct your figure and explanation. Finally, resubmit it to me."

Commentary on sample 2:

Incorrect – The teacher misdirects the student regarding his error by focusing on the size of the figure rather than the size and shape. To improve the teacher's feedback, revise the feedback as follows, "Cut out the two figures carefully and compare the size and shape. Write down what you discover, and then come and see me."

Commentary on sample 3:

Somewhat Effective – The teacher directs the student to focus on providing more details in his explanation without noting the student has made an error. Although asking the student to take action is an essential attribute of high quality feedback, this teacher provided incomplete information regarding what the student needs to do to meet the learning target. To improve the teacher's feedback, revise the feedback as follows, "Great job in attempting to show a transformed congruent figure. Circle where you made an error in the figure and correct it. Review your explanation and edit to include specific mathematics terminology."

Commentary on sample 4:

Highly-Effective – This teacher provides feedback to encourage the student to engage in self-regulated learning. The student who self-regulates this learning actively works to monitor and control his learning to meet goals. The student is encouraged to analyze his work and find the error. With this type of feedback, the student and teacher become partners in helping the student achieve the learning target. To improve the teacher's feedback, revise the feedback as follows, "Nice job on the drawing; it is just a little bit off. Find where it needs to be corrected, fix it, and resubmit! It seems you understand congruency based upon your explanation, but I would like you to revise your explanation so that it uses more specific mathematics terminology." Notice in the edited response the teacher is no longer asking the student "can you." Instead the teacher is now specifying that the student revise his response.

Commentary on sample 5:

Somewhat Effective – The teacher provides corrective feedback and asks the student to redraw the figure; however, the teacher does not help the student think how to demonstrate the congruent figure in the way he chose. The student's specific confusion in the student work is not addressed. To improve the teacher's feedback, revise the feedback as follows, "Find the single error in your figure and then re-draw it so that it is congruent to the shaded figure. Also, please revise your explanation to use more specific mathematics terminology to describe what makes the figure congruent."

Commentary on sample 6:

Not Effective – The teacher provides general corrective feedback (providing the definition of congruent) without asking the student to close the loop between his performance and the learning target. The feedback will likely be read and forgotten because the student is not asked to take action using the information. To improve the teacher's feedback, revise the feedback as follows, "Review the definition of congruent using your textbook. Next review and correct your figure and explanation and then resubmit it to me. Be sure to edit your explanation using the textbook as a support. Do not copy the definition directly from the textbook."

Commentary on sample 7:

Highly-Effective – This teacher provides feedback to encourage the student to engage in self-regulated learning using process-based feedback. The teacher suggests a process the student can use to find his own error. To improve the teacher's feedback we could revise the feedback as follows, "Cut out the first figure and turn it so that it fits on top of the figure you drew. What is wrong with your figure? Correct your figure. Using what you have discovered, edit your explanation of congruent to more clearly describe what makes one figure congruent to another."

Remind teachers that feedback techniques are effective for students with partial understanding. For those students with large gaps in their understanding, re-teaching is more useful than using these techniques. Lead a discussion with the teachers using the following questions prior to having teachers view the video segment "The Use and Interpretation of Test Scores."

Discussion Questions

- Based on the hypothetical teacher responses and commentary, what attributes can you conclude make feedback helpful to students?
- How did allowing you to provide sample feedback to the student and then revise that feedback based upon an analysis of the hypothetical teacher responses, help improve your understanding of what makes feedback effective?
- What do you understand about feedback that you did not understand previously?
- The student paper used in this task is a good student candidate for descriptive feedback techniques. You could also have used the "Two Stars and a Wish" technique. What would feedback using this technique look like?

Cover Page

Investigating What Makes Feedback Effective

On the next page, you will see a student's response to a task along with feedback to the student from seven different hypothetical teachers. Using the rubric below, determine how effective the teacher's feedback is to the student.

Feedback Rubric

Highly Effective
The teacher provides precise feedback (corrective, process-based, self-regulated) to the student based upon his or her misconception of the learning target. The feedback asks that the student take one or more actions that will assist the student in determining what to do next to improve. The additional feedback from the student will assist the teacher in determining future instruction of the learning target.

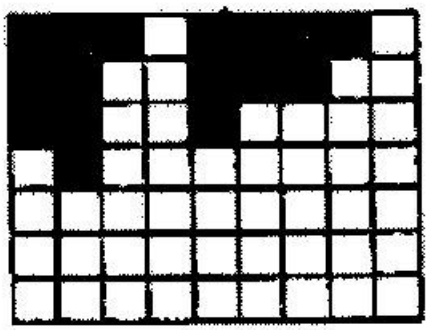
Somewhat Effective
The teacher generally provides feedback to the student, but the language is imprecise and overly generalized. The teacher may not base the feedback on the student misconception of the learning target. Although the teacher may request additional information, the information may not quickly assist the teacher in determining future instruction for the learning target.

Not Effective
The teacher provides feedback to the student. The teacher does not request additional information from the student or the requested information or feedback does not help to clarify the learning target.

Incorrect Feedback
The feedback is incorrect, restates the original problem, or tells the answer.

Task

Draw a figure on the grid that is congruent to the shaded figure. Explain why your figure is congruent to the one in the picture.



I did mine like the one in the picture but mine is side ways.

Feedback Examples

Example 1
Review the definition of congruency

Example 2
Cut out the two figures carefully and compare their sizes. Are they congruent? Come see me after you are finished.

Example 3
Great job. Can you give me more details on your explanation?

Example 4
Nice job on the drawing. It seems you understand congruency, but your picture is just a little bit off. Can you find where it needs to be corrected?

Example 5
Draw the figure congruent to the shaded figure on the grid without showing a flip. This time I would like for you to slide the figure.

Example 6
Remember that congruence is only when something is the exact shape and size as another figure even if it is turned in another direction.

Example 7
Cut out the first figure and turn it so that it fits on top of the figure you drew. What is wrong with your figure?

Individual Performance Task 8:
Planning Effective Feedback

In this assignment use a performance task and rubric to be administered to students in the upcoming week. After administering, analyze and group student responses to diagnose student misconceptions or confusions. Then determine which groups of students would benefit from feedback as a next instructional step. Provide feedback (or reteach). Then develop and administer a parallel performance task and rubric to determine if improvement based on the learning target was made.

- ☐ Collect the student responses to the performance task.
- ☐ Review one class's individual student responses and place responses into one of three groups based upon similarity of student errors.
- ☐ Review the three groups of papers to determine what students know and do not know.
- ☐ Provide feedback as appropriate. Otherwise, re-teach as necessary. Make sure students resubmit work in response to feedback or re-teaching.
- ☐ Develop a different, parallel performance task and rubric and administer to students after they receive follow-up feedback or instruction that targets misconception.
- ☐ Write a one-page reflection centered in these questions. How did student performance change from original performance task to the follow-up performance task? Did you find feedback an effective tool to help individualize information to student needs? Provide details regarding why or why not. Given that this is a time-consuming process, what can you do to manage the process successfully?
- ☐ Your reflection will be graded on the basis of the depth of thinking, the discussion of the questions, and on the quality of the parallel performance task and rubric. Attach to your reflection the two performance tasks (and rubric for the second task).

Rubric for Individual Performance Task 8:
Planning Effective Feedback

Name: _____

Criteria	**Scale**				**Score**
	0	**1**	**2**	**3**	
Reflection	*No* discussion of instruction information	Issues related to instruction formulated and *somewhat* articulated	Issues related to instruction *fully* formulated and *clearly* articulated		
Student directions	Not provided	Directions implicit in task description but not explicitly written for students	Directions written for students but unclear in some aspects or not appropriate for the grade level	Directions, including criteria for assessment, clearly written for students and appropriate for the grade level	
Newman, Bryk, & Nagaoka, (2001) performance task standards	The task does not meet the standards	The task meets Standard 1	The task meets Standards 1 and 2	The task meets all the standards	
Long-term memory	The task does not require students to retrieve information from their long-term memory.	The task requires that students retrieve information from their long-term memory.			
Rubric	Not provided	Some elements missing from rubric or criteria not based on targeted state indictors, or language from the indicators not used	Only minor faults in rubric or criteria based only somewhat on targeted state indictors and only some language from the indicators used	Clear rubric delineating levels of performance based on targeted state indictors and using language from the indicators	

Portfolios

For the Facilitator

Prior to the session, copy and make a packet with the following materials for each teacher: "Development of a Chemistry Portfolio," and "Portfolio Guiding Considerations." Include the module PowerPoint and "Individual Performance Task 9" and corresponding rubric. Hand out the packet to teachers after viewing the "Portfolios" segment. Give teachers about 20 minutes to read the "Development of a Chemistry Portfolio."

Next, in preparation for developing a plan for implementing a portfolio assessment in the classroom, ask teachers to find a standard in the content area that may be assessed through a portfolio. Teachers should focus on an indicator or curriculum standard that is broad and would be considered a "big idea" for the content area. Ask teachers to work individually to complete the "Portfolio Guiding Considerations" sheet.

After about 20 minutes have teachers divide into content groups and share responses to the "Portfolio Guiding Considerations" sheet. Prior to sharing, teachers should choose a spokesperson who will write down common themes or points that arise from the group's discussion. This phase should take about 20 minutes.

Next, using these common themes as a starting point, have each group work to complete the "Portfolio Guiding Considerations" a second time. Then, ask the content groups to reconvene as a whole. Lead a discussion among the spokespersons about the use of portfolios across content areas. Using an overhead projector (or dry erase board or chalk board), write the themes that are common across the content areas as each spokesperson reads and discusses his or her group's guiding considerations.

Focus the group discussion on the following questions:

1. What were the big ideas for your content area?
2. How did merging the responses of the individuals in the content group operate to strengthen the group's final responses to the "Portfolio Guiding Considerations" sheet?
3. What are the revised Bloom's taxonomy levels of the indicators that were chosen?
4. What type of portfolio do you feel most comfortable using?
5. Does the group as a whole have ideas regarding how to prepare students for constructing a portfolio? That is, have the staff members identified the teaching implications that are necessary to have students build a successful portfolio?

Development of a Chemistry Portfolio

Review the description of the chemistry portfolio being developed by Angela Hill, a high-school chemistry teacher. She plans to require that multiple examples of student work be developed and analyzed during the course of the year for inclusion in a portfolio. At the end of the year, her students will review their work to connect themes and develop a summary reflection to show depth of learning.

Guiding Considerations

Portfolio purpose

- Illustrate students' understanding of concepts and theories in chemistry and their skills in conducting investigations.

Audience

- The audience for the chemistry portfolio includes the students, their parents, other faculty, and professors at the universities the students will attend.

Type of portfolio

- In the Advanced Placement chemistry course, each student will provide evidence that he or she has completed college-level laboratory work. He or she should include original data tables, full-length laboratory reports, videos, pictures – a variety of evidence.
- In the college preparation and honors classes, each student will provide evidence that he or she is able to demonstrate inquiry skills, including conducting an investigation and writing a laboratory report.

Focus

- The "big ideas" that center the portfolio include the following:
    - Use basic chemical principles, applicable mathematical concepts, and appropriate technology tools to evaluate the reliability of laboratory results.
    - Design simple scientific investigations with appropriate methods to solve problems and test hypotheses.
    - Communicate laboratory results effectively.
    - Conduct all chemical investigations safely.

  Students will also set their own goals in terms of content, technology, and personal growth

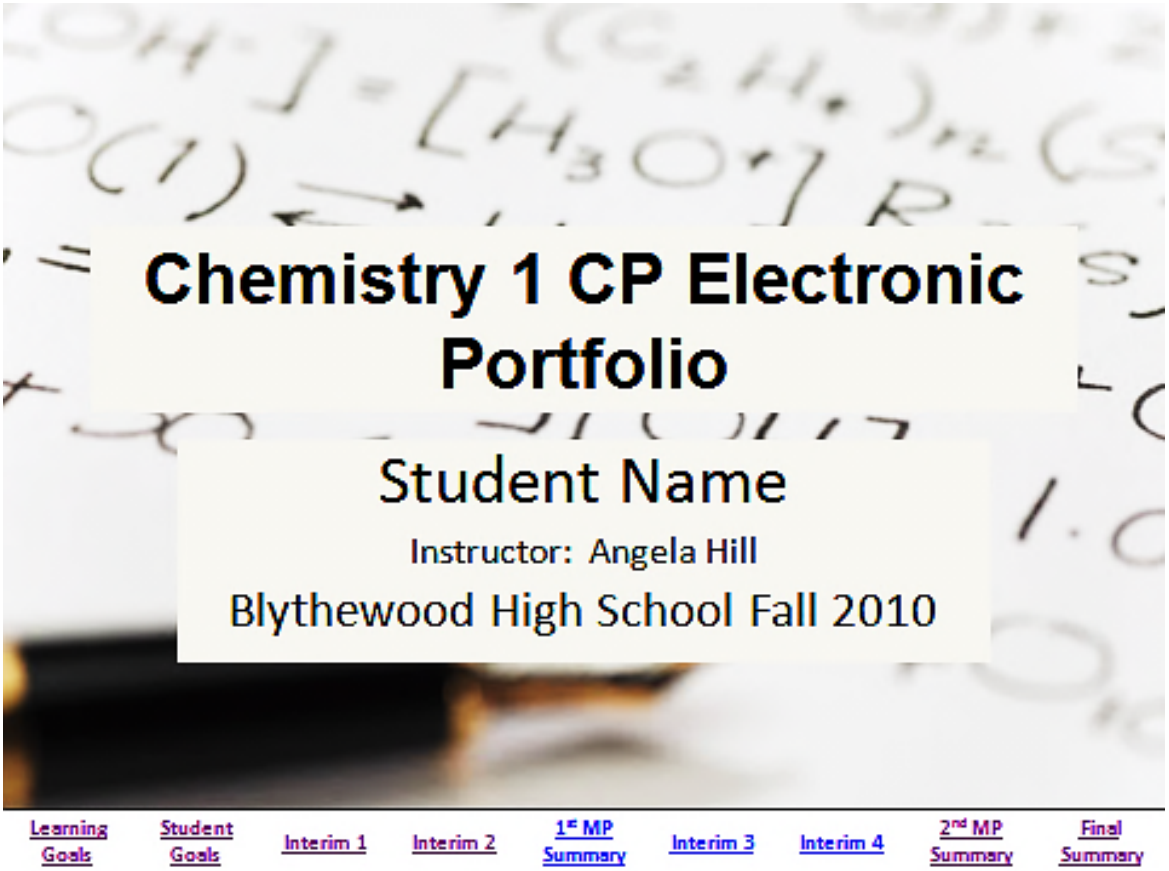
Development of performance tasks/artifacts

- The learning goals will require students to evaluate the reliability of laboratory results, design simple scientific investigations, communicate laboratory results, and conduct all chemical investigations safely. The levels of cognitive skills will target from the "apply" level to the "Create" level described in Anderson and Krathwohl's (2001) *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*.

- The artifacts in the chemistry portfolio will include sections of laboratory reports (e.g., materials, procedures, results), data tables, graphs, and videos of the laboratories. These tasks are consistent with the learning goals and require students to "organize, interpret, evaluate, or synthesize information in their long-term memory to solve a new problem."

Structure of the portfolio

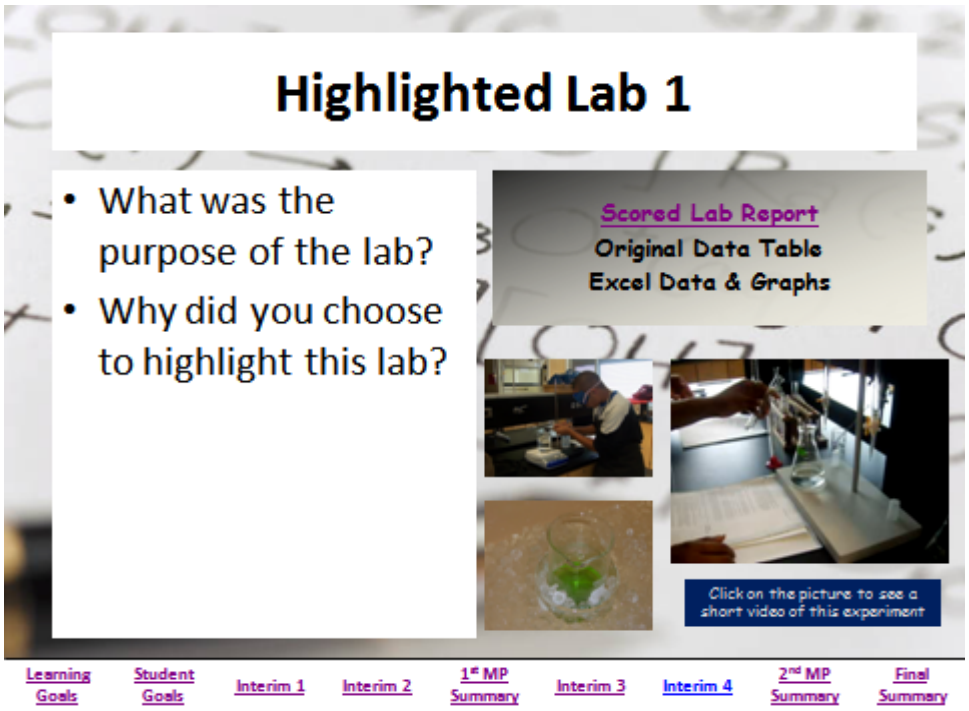
- Table of contents: The chemistry portfolio will use PowerPoint (see Slide 1) to organize materials, and the students' portfolios will be stored in thumb drives (also known as a flash drive or USB drive). The first page of the portfolio will be the title page. Along the bottom of the title page students will display the various components of the portfolio, such as the learning goals, student goals, and links to pages in which the students' laboratory materials will stored.
- Reflections: Students will select which laboratories they wish to include in the portfolio. As part of selecting a laboratory to include, students will write about the purpose of the laboratory and why they chose to highlight the laboratory. In preparing to answer these reflective questions, students will be instructed to consider the course learning goals and their student goals (i.e., content, technology, and personal growth).
- Letter to the reviewer: At the end of each marking period, Angie will ask her students to write a summary reflection of their content area growth. This summary reflection potentially engages students in developing metacognitive knowledge, described by Anderson and Krathwohl (2001) as "knowledge of cognition in general as well as awareness and knowledge of one's own cognition" (p. 46). Possible additional foci of the summary reflection include students' evaluating their own learning goals, progress, and the setting of new goals.



Slide 1: Title page of the chemistry portfolio.

Criteria for selection of items

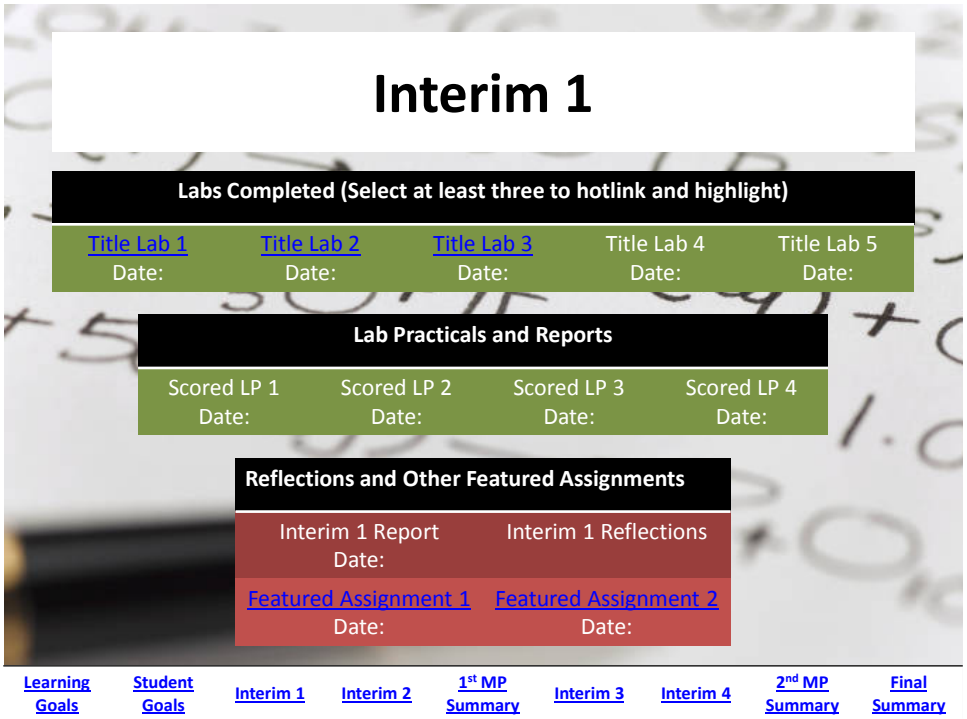
- Students will select the laboratories to include in the portfolio and accompany the achievement evidence with a statement about its purpose and their reason for highlighting the laboratory (see Slide 2).



Slide 2: Selection of portfolio items

Record-keeping system

- The record-keeping system will be built into the chemistry portfolio. At the bottom of each slide will be tabs (see Slide 3). For each grading period, students select and upload laboratory reports and reflections.



Slide 3: Record keeping.

Scoring criteria

- Angie will score the components of the portfolio and plans not to assign an overall grade to the portfolio. To score student graphs, Angie plans to use a checklist (see the example in the chapter on checklists). She plans to use a holistic rubric for informal laboratory reports and an analytic rubric for the formal laboratory reports. In considering assignment of an overall portfolio score, Angie could revisit the course learning goals and student goals and develop a holistic rubric. An example of the top level of such a rubric is shown below.

Expert: The portfolio entries reflect the student's achievement in the design of scientific investigations with appropriate methods to solve problems and test hypotheses. The student uses basic chemical principles, applicable mathematical concepts, and appropriate technology tools to evaluate the reliability of laboratory results. The results are communicated effectively. The laboratory checklists indicate that the student conducts all chemical investigations safely. The student's final reflection describes the achievement of his or her student goals (i.e., content, technology, personal growth) in the context of the course goals and investigations. The student's reflection also discusses areas for future growth.

Teaching Implications

- Early into the class, students will require practice in stating the purpose of each scientific investigation. As the school year continues, students will need to review their graphs, informal reports, and formal laboratory reports and discuss which assignments to feature and why. This discussion might be part of teacher-student conferences or in peer reviews. After discussion, students will need to record their thoughts in brief, written reflections. Students will likely need exemplars of what good reflections look like to help them conceptualize what is expected.

Portfolio Guiding Considerations

Below are aspects of portfolios to consider in the development of this form of student assessment. For each aspect, describe the portfolio for your class.

Portfolio purpose

Audience (e.g., self-reflection, communicate to parents, communicate to other teachers, document student achievements for university credit)

Type of portfolio (e.g., showcase, growth, documentation)

Focus (i.e., content standards/goals)

Development of performance tasks/artifacts (e.g., levels of cognitive skills, content, assessment formats, such as essays, projects, videotapes)

Structure of the portfolio (table of contents, letter to the reviewer, reflections)

Criteria for selection of items (e.g., best work, typical performance, growth)

Shared responsibility for creation of portfolio

Record-keeping system

Scoring criteria (analytic, holistic, checklist)

Teaching implications (e.g., processes, such as collaboration, writing essays, reflection, selection of artifacts, and conferences to follow development of portfolios).

Individual Performance Task 9:
Course Analysis Portfolio

Your final project for this course will demonstrate through a portfolio your learning and skill in developing and using classroom assessments to inform instruction. Your portfolio will have three parts. Part 1 will contain a table of contents.

The following are the details concerning parts 2 and 3 of your portfolio.

Part 2 will contain reflections on a total of **three artifacts** related to classroom assessment. (An artifact may be an assessment you developed prior to the course, an assessment you developed during the course, samples of student work in response to an assessment, something from your personal or professional life related to assessment, or something from a published source such as a journal article.) The artifacts should illustrate the development of your understanding of assessment practices and uses over the course of this twelve-week period. Each reflection should be approximately one typed page (double-spaced) and should examine what you learned, how the task/artifact relates to assessment, and how the artifact relates to your professional development in assessment.

Include a two-to four-page analysis of the reflections and the artifacts in your portfolio. The analysis should clearly integrate the information in the artifacts and reflections while also accomplishing the following:

- demonstrating your learning and development in the course with regard to classroom assessment practices,
- relating the artifacts and reflections to the major concepts discussed in the course and to your career, and
- identifying an overarching theme or “big idea” about your development in classroom assessment.

Use the holistic rubric in completing this task. Attach the rubric to the completed assignment when you submit it.

Holistic Rubric for Individual Performance Task 9: Portfolio Reflections and Course Analysis

Advanced **21 points***	A portfolio at this level is described by many of the following statements: • The portfolio meets the specified requirements for content. • The artifacts and reflections *clearly* illustrate the development of understanding about classroom assessment and the ability to apply to readings, professional work, or course documents the major concepts stressed in the course. • Statements in the reflections are *clearly* linked to the class text, videos, and/or themes. • The analysis integrates the information presented in the artifacts and the major concepts gained in the course to develop an overarching theme or "big idea" regarding the teacher's development in classroom assessment. The analysis addresses how classroom assessment relates to the teacher's career. • Goals for future growth are addressed for specific assessment issues.
Proficient **16 points***	A portfolio at this level is described by many of the following statements: • The portfolio meets the specified requirements about content. • The artifacts and reflections provide some illustration of the development of understanding about classroom assessment and *some* ability to apply to readings, professional work, or course documents the major concepts stressed in the course. • Statements in the reflections are *occasionally* linked to the class texts, videos, and/or themes. • The *analysis somewhat* integrates the information presented in the artifacts and the major concepts gained in the course to develop an overarching theme or "big idea." The analysis addresses how assessment relates to the teacher's career. • Directions for future growth are discussed in a general manner.
Developing **14 points***	A portfolio at this level is described by many of the following statements: • The portfolio meets *some* of the specified requirements about content. • *Some* reflections are missing for the artifacts, or the artifacts and reflections provide *minimal* illustration of the development of understanding about classroom assessment and *minimal* ability to apply to readings, professional work, or course documents the major concepts stressed in the course. • Statements in the reflections are not linked to the class texts, videos, and/or themes. • An analysis is attempted; however, it does not demonstrate the link between the artifacts and the course concepts to develop a theme or "big idea." The analysis ignores or partially addresses how assessment relates to the teacher's career. • Directions for future growth are either ignored or only briefly discussed.

* Scores may be adjusted (assigned ±1 or 2 points) for portfolios that are on the borderline between two of the three descriptive levels. For example, a portfolio that is *nearly* at the advanced level would receive 18 points rather than 21, while a portfolio that *slightly* surpasses the proficient level would receive 17 points rather than 16.

Portfolio score: _____

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