

Middle Childhood/Generalist

Component 1: Content Knowledge

SAMPLE ITEMS AND SCORING RUBRICS

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Overview

This document provides information about the Middle Childhood/Generalist (MC/Generalist) Component 1 computer-based assessment. It includes sample assessment center selected response items and answer key, constructed response exercises, and the scoring rubric used to assess each constructed response exercise.

Component 1: Content Knowledge

Component 1: Content Knowledge is a computer-based assessment requiring candidates to demonstrate knowledge of and pedagogical practices for their teaching content area. Candidates must demonstrate knowledge of developmentally appropriate content, which is necessary for teaching across the full age range and ability level of the chosen certificate area.

MC/Generalist Component 1 Computer-Based Assessment

In the MC/Generalist Component 1 computer-based assessment, content knowledge is assessed through the completion of approximately 45 selected response items and three constructed response exercises.

MC/Generalist Standards Measured by Selected Response Items

The MC/Generalist selected response items focus on the following Standards:

Standards Content (Standard IV)	Approximate Percentage of Selected Response Item Section*
<p>English Language Arts, the Arts, and Health and Wellness</p> <ul style="list-style-type: none"> • Balanced Literacy • Choosing Texts • Analyzing Texts • Value and Purposes of Visual and Performing Arts through Cross-Curricular Contexts • Health Enhancing Skills 	30%
<p>Science and Mathematics</p> <ul style="list-style-type: none"> • Number Sense and Algebraic Thinking • Geometry • Data Analysis • Knowledge of Science Domains: Life, Earth/Space, and Physical Sciences • Vocabulary of Science • Misconceptions and Evolution of Scientific Thinking • Science Tools, Models, and Representations and Engineering Design Principles 	35%

Social Studies <ul style="list-style-type: none">• Knowledge of Social Studies Content: History, Geography, Civics/Government, Economics• Themes of Social Studies• Primary and Secondary Sources and Critical Thinking in Social Studies	35%
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* These percentages are an approximation only. Following field testing and review of data, the final assessment will be created. The final assessment content may vary from these estimates.

For the complete MC/Generalist Standards, refer to www.boardcertifiedteachers.org.

MC/Generalist Constructed Response Exercises

The MC/Generalist constructed response exercises assess the following:

- **Exercise 1: Supporting Reading Skills**
In this exercise, you will use your content and pedagogical knowledge of reading to analyze and interpret a transcript of a student’s oral reading of a given reading passage to identify a strength and a weakness in the student’s oral reading and to identify and justify appropriate strategies to support the student’s ongoing reading development. You will be asked to respond to one prompt.
- **Exercise 2: Analyzing Student Work in Mathematics**
In this exercise, you will use your content and pedagogical knowledge of math to identify a major math misconception or error in a student’s work, identify appropriate concepts/skills the student needs to solve a problem accurately, provide an instructional strategy to address the student’s misconception or error, and provide a rationale for the strategy. You will be asked to respond to one prompt.
- **Exercise 3: Making Connections in Science**
In this exercise, you will use your knowledge of fundamental science content, including a cross-curricular concept. You will also demonstrate your knowledge of pedagogical appropriateness and describe a developmentally appropriate learning experience that will help students understand real-world phenomena. You will be asked to respond to one prompt.

Each constructed response exercise will be assessed using a scoring rubric. Each MC/Generalist Component 1 scoring rubric is derived from the MC/Generalist Standards and defines the levels of accomplished teaching that you must demonstrate.

You should read the rubric while preparing to take Component 1 to understand how the rubric guides assessors in evaluating your responses to the constructed response exercises.

Inside This Document

This document includes the following two sections: "Sample Selected Response Items and Answer Key for MC/Generalist Component 1" and "Sample Constructed Response Exercises and Scoring Rubrics for MC/Generalist Component 1."

Selected Response Section

This section includes the following:

- five sample selected response items
- answer key

Constructed Response Section

This section includes the following:

- three sample constructed response exercises
- associated scoring rubric for each exercise

For information about scheduling and taking your test at the assessment center, please refer to the *Assessment Center Policy and Guidelines*. For more information about how the assessment is scored, please refer to the *Scoring Guide*.

Sample Selected Response Items and Answer Key for MC/Generalist Component 1

This section includes

- **sample selected response items** to help you become familiar with the content and format of the items on an actual computer-based assessment.

Although this section illustrates some of the types of items that appear on the assessment, note that these sample items do not necessarily define the content or difficulty of an entire actual assessment.

Please note that the selected response items cover the *entire* age range of the certificate. Be aware that you are expected to demonstrate knowledge of developmentally appropriate content across the full range of your certificate.

- **reference material**, as appropriate, provided as part of the assessment, such as formula and constants pages and the periodic table.
- an **answer key**.

Sample Selected Response Items

1. A third-grade teacher is planning a geography unit on the concepts of location and place. Which of the following approaches would be the most effective way to ignite the students' interest in the topic?
 - A. having students write a report about a country they would like to visit someday
 - B. reading aloud *Around the World in Eighty Days* in class and having students track the main character's progress on a map
 - C. having students build a large three-dimensional map of their community with papier-mâché and cardboard boxes
 - D. installing a computer game on the classroom computer that times students on how quickly they can locate a specific country

2. A student believes there are exactly two lines of symmetry in a square. Which of the following activities could the teacher use to help the student understand symmetry?
 - A. asking the student to cut a square piece of paper into smaller, congruent squares
 - B. asking the student to review a definition of symmetry and write it in his or her own words
 - C. asking the student to fold a square piece of paper and mark each line of symmetry the student folds
 - D. asking the student to draw half of a shape after being given the other half of the shape and a line of symmetry

3. A teacher divides the class into small groups and has each group construct a model of a bridge that spans 30 cm across two desks and can support a mass of 1 kg. Each group uses different materials found in the classroom to construct the model. The teacher is most likely engaging students in this activity to help them:
- A. develop a working knowledge of the scientific requirements needed to produce safe bridges over canyons.
 - B. describe the scientific principles used in selecting materials for constructing bridges over rivers.
 - C. discuss the engineering tools needed to construct different types of bridges.
 - D. understand the engineering design principles used in constructing sturdy bridges.

4. Archaeological expeditions of early Native American sites in the present-day state of Ohio have uncovered copper medallions, grizzly bear teeth, seashell necklaces, and knives carved from obsidian. These artifacts best support the inference that the early peoples of this region:
- A. migrated along streams and waterways to meet their needs.
 - B. had resources that differed greatly from those of present times.
 - C. were nomads who lived a hunter-gatherer lifestyle.
 - D. relied on trade to obtain materials they wanted.

5. Which of the following sources can a teacher best use to provide students with an introduction to the purpose of the League of Nations?
- A. an image of the Big Four leaders at the 1919 Paris Peace Conference
 - B. the text of President Woodrow Wilson's Fourteen Points
 - C. a transcript of Henry Cabot Lodge's 1919 Senate speech about the Treaty of Versailles
 - D. the Atlantic Charter that expressed need for the United Nations

Answer Key to Sample Selected Response Items

Item Number	Correct Response
1	C
2	C
3	D
4	D
5	B

Sample Constructed Response Exercises and Scoring Rubrics for MC/Generalist Component 1

This section includes

- **sample constructed response exercises** to help you become familiar with the content and format of the exercises on an actual computer-based assessment. These exercises include instructions for using the computer, stimulus materials (if applicable), and prompts requiring responses.

Although this section illustrates some of the types of exercises that appear on the assessment, note that these sample exercises do not necessarily define the content or difficulty of the exercises on an actual assessment.

Please note these constructed response exercises cover the **entire** age range of the certificate. Be aware that you are expected to demonstrate knowledge of developmentally appropriate content across the full range of your certificate.

- **scoring rubrics** that are used by assessors in evaluating your responses to help you understand how your responses are assessed.

Sample Exercise 1 and Scoring Rubric

Sample Exercise 1

Exercise 1: Supporting Reading Skills- Candidate Name		⌚ Time Remaining 29:31
Supporting Reading Skills		
<u>Introduction</u>		
<p>In this exercise, you will use your content and pedagogical knowledge of reading to analyze and interpret a transcript of a student's oral reading of a given reading passage to identify a strength and a weakness in the student's oral reading and to identify and justify appropriate strategies to support the student's ongoing reading development. You will be asked to respond to one prompt.</p>		
<u>Criteria for Scoring</u>		
<p>To satisfy the highest level of the scoring rubric, your response must provide clear, consistent, and convincing evidence of the following:</p>		
<ul style="list-style-type: none">• knowledge of reading as demonstrated through an accurate identification of one strength and one weakness in a given student's oral reading, citing specific examples from the passage and the student's reading;• a thorough description of two specific, effective instructional strategies to address the identified weakness in the student's reading, including significant evidence of the appropriateness of the strategies for supporting the student's ongoing reading development; and• a thorough rationale for each instructional strategy that explicitly connects each strategy to the student's identified reading strength and weakness.		
<u>Directions</u>		
<p>You may view the prompt by clicking the Next button. Compose your response in the space provided.</p>		
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Exercise 1: Supporting Reading Skills- Candidate Name		 Time Remaining 29:31
<p>You must address each of the following in your response.</p> <ul style="list-style-type: none">• Identify one strength and one weakness evident in the student’s oral reading. Cite examples from the record of the student’s reading to support your response.• Describe two specific, effective instructional strategies you would use to address the reading weakness you identified. <p>For each instructional strategy you have described, give a rationale for its use, including how it relates to the student’s ongoing reading development as well as to the reading strength and weakness you identified.</p>		
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Scoring Rubric for Exercise 1

The **LEVEL 4** response offers *clear, consistent, and convincing* evidence of content and pedagogical knowledge of reading by accurately identifying a strength and a weakness in a given student's oral reading and planning effective instructional strategies that develop the given student's reading skills.

Characteristics:

- One reading strength and one reading weakness are identified. Descriptions of the reading strength and the reading weakness are accurate and specific.
- Cited examples from text (passage and student's reading) are tightly connected to the identified reading strength and reading weakness.
- Two effective instructional strategies are described thoroughly and in detail. Both instructional strategies effectively address the identified reading weakness fully.
- Thorough rationales that justify each instructional strategy are given. The rationales are significantly connected to the identified reading strength and weakness of the student.
- Significant evidence is given of the appropriateness of the instructional strategies for supporting the student's ongoing reading development.

The **LEVEL 3** response offers *clear* evidence of content and pedagogical knowledge of reading by accurately identifying a strength and a weakness in a given student's oral reading and planning effective instructional strategies that develop the given student's reading skills.

Characteristics:

- One reading strength and one reading weakness are correctly identified.
- Cited examples from text (passage and student's reading) are connected to the identified reading strength and reading weakness, although one example may not have a strong connection to the identified strength or weakness.
- Two effective instructional strategies are described. Both instructional strategies appropriately address the identified reading weakness.
- Clear rationales that justify each instructional strategy are given. The rationales are connected to the identified reading strength and weakness of the student.
- Evidence is given of the appropriateness of the instructional strategies for supporting the student's ongoing reading development.

The **LEVEL 2** response offers *limited* evidence of content and pedagogical knowledge of reading by accurately identifying a strength and a weakness in a given student's oral reading and planning effective instructional strategies that develop the given student's reading skills.

Characteristics:

- One reading strength and/or one reading weakness is correctly identified.
- Cited examples from text (passage and student's reading) may be connected to but may not support the identified reading strength and/or reading weakness.
- Two instructional strategies are described. Both instructional strategies only somewhat address the identified reading weakness.
- Rationales that justify each instructional strategy are unclear or inappropriate. The rationales are tangentially connected to the identified reading strength and/or weakness of the student.
- Limited evidence is given of the appropriateness of the instructional strategies for supporting the student's ongoing reading development.

The **LEVEL 1** response offers *little or no* evidence of content and pedagogical knowledge of reading by accurately identifying a strength and a weakness in a given student's oral reading and planning effective instructional strategies that develop the given student's reading skills.

Characteristics:

- Neither the reading strength nor the reading weakness is correctly identified.
- Cited examples from text (passage and student's reading) do not support the identified reading strength or reading weakness.
- Instructional strategies may be missing, irrelevant, or may not appropriately address the identified reading weakness.
- Rationales may be missing, do not justify the instructional strategy(ies), or are unconnected to the identified reading strength and/or weakness of the student.
- Little or no evidence is given of the appropriateness of the instructional strategy(ies) for supporting the student's ongoing reading development or the evidence given describes reading development inaccurately.

Sample Exercise 2 and Scoring Rubric

Sample Exercise 2

Exercise 2: Analyzing Student Work in Mathematics -
Candidate Name

 Time Remaining
29:31

Analyzing Student Work in Mathematics

Introduction

In this exercise, you will use your content and pedagogical knowledge of math to identify a major math misconception or error in a student's work, identify appropriate concepts/skills the student needs to solve a problem accurately, provide an instructional strategy to address the student's misconception or error, and provide a rationale for the strategy. You will be asked to respond to one prompt.

Criteria for Scoring

To satisfy the highest level of the scoring rubric, your response must provide clear, consistent, and convincing evidence of the following:

- a thorough and accurate identification of the given student's major misconception or error with a relevant example cited;
- an accurate identification of the appropriate concepts/skills that would allow the student to solve the problem accurately;
- a description of an effective instructional strategy that thoroughly addresses the student's misconception or error; and
- a thorough and sound rationale for the instructional strategy.

Directions

You may view the prompt by clicking the **Next** button. Compose your response in the space provided.

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Exercise 2: Analyzing Student Work in Mathematics -
Candidate Name

 **Time Remaining**
29:31

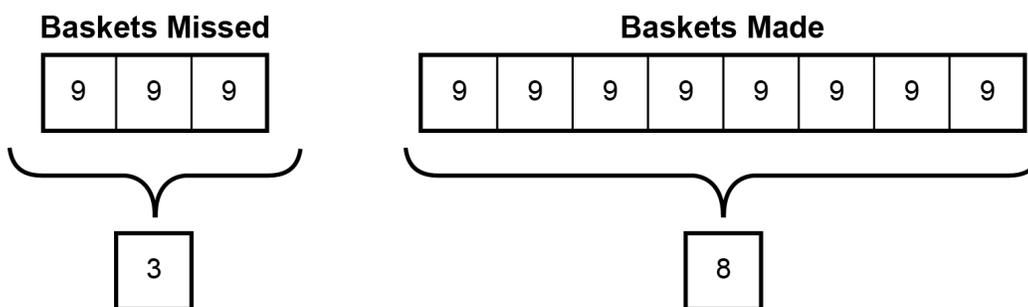
Scenario

You are teaching math to a group of **sixth-grade** students of mixed abilities. Below is a math problem, a student's solution to the problem, and an explanation of how the student derived the solution.

Math Problem

Jasmine played in a basketball tournament. The ratio of the number of baskets she missed during the tournament to the number of baskets she made is 3:8. If Jasmine missed 9 baskets during the tournament, how many baskets did she make? Draw a diagram to demonstrate how you found your answer.

Student Solution



Student Explanation

To create equivalent ratios, you multiply both numbers of the ratio by the same number, so I multiplied both numbers in the given ratio by 9 (3×9 and 8×9). Therefore, we can say that 3:8 is equivalent to 27:72, and Jasmine made 72 baskets.

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Exercise 2: Analyzing Student Work in Mathematics -
Candidate Name

 Time Remaining
29:31

You must address each of the following in your response.

- Identify a major misconception or error that is evident in the student's solution. Give an example from the student's work that illustrates the misconception or error.
- Identify the underlying mathematical concepts/skills that would allow this student to solve the problem accurately.
- Describe **one** instructional strategy you would use to address the mathematical misconception or error you identified in the student's solution. Provide a rationale to support your use of this strategy.

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Scoring Rubric for Exercise 2

The **LEVEL 4** response offers *clear, consistent, and convincing* evidence of the ability to demonstrate pedagogical knowledge of math to identify a major math misconception or error in a student's work, identify appropriate concepts/skills the student needs to solve a problem accurately, provide an instructional strategy to address the student's misconception or error, and provide a rationale for the strategy.

Characteristics:

- Analysis of the student's misconception/error is thorough and accurate with a relevant example cited.
- Identification of concepts/skills that are embedded in the given problem is accurate.
- Instructional strategy thoroughly addresses the student's misconception/error or is clear in meeting the needs of the student.
- Thorough and sound rationale provided for the given strategy.

The **LEVEL 3** response offers *clear* evidence of the ability to demonstrate pedagogical knowledge of math to identify a major math misconception or error in a student's work, identify appropriate concepts/skills the student needs to solve a problem accurately, provide an instructional strategy to address the student's misconception or error, and provide a rationale for the strategy.

Characteristics:

- Analysis of the student's misconception/error is clear and accurate with a relevant example cited.
- Identification of concepts/skills that are embedded in the given problem is accurate.
- Instructional strategy demonstrates understanding of the student's misconception/error or is clear in meeting the needs of the student.
- Sound rationale provided for the given strategy.

The **LEVEL 2** response offers *limited* evidence of the ability to demonstrate pedagogical knowledge of math to identify a major math misconception or error in a student's work, identify appropriate concepts/skills the student needs to solve a problem accurately, provide an instructional strategy to address the student's misconception or error, and provide a rationale for the strategy.

Characteristics:

- Analysis of the student's misconception/error is limited or no student example is cited.
- Identification of some related concepts/skills may be inaccurate.
- Instructional strategy demonstrates limited understanding of the student's misconception/error or is limited in meeting the needs of the student.
- Rationale may be implied or loosely connected to the given strategy.

The **LEVEL 1** response offers *little or no* evidence of the ability to use pedagogical knowledge of math to identify a major math misconception or error in a student's work, identify appropriate concepts/skills the student needs to solve a problem accurately, provide an instructional strategy to address the student's misconception or error, and provide a rationale for the strategy.

Characteristics:

- Analysis of student's misconception/error is vague and sketchy or no student example is cited.
- Identification of concepts/skills may be inaccurate or missing.
- Instructional strategy demonstrates little or no understanding of the student's misconception/error or may be inappropriate in meeting the needs of the student.
- Rationale may be irrelevant or missing.

Sample Exercise 3 and Scoring Rubric

Sample Exercise 3

Exercise 3: Making Connections in Science - Candidate Name		⌚ Time Remaining 29:31
Making Connections in Science		
<u>Introduction</u>		
<p>In this exercise, you will use your knowledge of fundamental science content, including a cross-curricular concept. You will also demonstrate your knowledge of pedagogical appropriateness and describe a developmentally appropriate learning experience that will help students understand real-world phenomena. You will be asked to respond to one prompt.</p>		
<u>Criteria for Scoring</u>		
<p>To satisfy the highest level of the scoring rubric, your response must provide clear, consistent, and convincing evidence of the following:</p>		
<ul style="list-style-type: none">• an accurate identification of fundamental science concepts or principles related to a given real-world phenomenon;• a thorough and detailed description of a developmentally appropriate and worthwhile hands-on learning experience that is related to one of the identified concepts or principles;• a substantive, thorough, sound, and developmentally appropriate rationale for the use of the learning experience to address the content topic; and• a description of how this science concept or principle might be integrated into another content area		
<u>Directions</u>		
<p>You may view the prompt by clicking the Next button. Compose your response in the space provided.</p>		
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Exercise 3: Making Connections in Science - Candidate Name		 Time Remaining 29:31
Scenario		
<p>A teacher is preparing a fourth-grade classroom lesson to answer the following question. Why do I get shocked sometimes when I touch a doorknob?</p>		
<p>You must address each of the following in your response.</p> <ul style="list-style-type: none">• Identify the fundamental science concepts or principles that fourth-grade students need in order to understand the question and how to answer it. Explain how one of these concepts or principles is applied to the phenomenon.• Thoroughly describe a hands-on science lesson that involves the identified phenomenon. Describe all materials and methods used in the lesson.• Provide a substantive, developmentally appropriate rationale describing how this lesson addresses the content of the topic.• Describe how this science concept or principle might be integrated into one other content area.		
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Scoring Rubric for Exercise 3

The **LEVEL 4** response offers *clear, consistent, and convincing* evidence of the ability to use pedagogical and content knowledge of science to identify fundamental science-related concepts and/or principles of a given real-world phenomenon, including a cross-curricular concept, and provide a developmentally appropriate instructional learning experience that relates to the given real-world phenomenon.

Characteristics:

- An accurate and thorough identification of fundamental science concepts or principles related to a given real-world phenomenon.
- A thorough and detailed description of a developmentally appropriate and worthwhile hands-on learning experience that is related to one of the identified concepts or principles.
- A substantive, thorough, sound, and developmentally appropriate rationale for the use of the learning experience to address the content topic.
- A thorough and detailed description of how this science concept or principle might be integrated into another content area.

The **LEVEL 3** response offers *clear* evidence of the ability to use pedagogical and content knowledge of science to identify fundamental science-related concepts and/or principles of a given real-world phenomenon, including a cross-curricular concept, and provide a developmentally appropriate instructional learning experience that relates to the given real-world phenomenon.

Characteristics:

- An accurate identification of fundamental science concepts or principles related to a given real-world phenomenon.
- A clear description of a developmentally appropriate and worthwhile hands-on learning experience that is related to one of the identified concepts or principles.
- A clear and appropriate rationale for the use of the learning experience to address the content topic.
- A clear description of how this science concept or principle might be integrated into another content area.

The **LEVEL 2** response offers *limited* evidence of the ability to use pedagogical and content knowledge of science to identify fundamental science-related concepts and/or principles of a given real-world phenomenon, including a cross-curricular concept, and provide a developmentally appropriate instructional learning experience that relates to the given real-world phenomenon.

Characteristics:

- A somewhat accurate identification of fundamental science concepts or principles related to a given real-world phenomenon.
- Weak or vague learning experience (with limited use of instructional materials) that may not be related to a developmentally appropriate and worthwhile hands-on learning experience that is related to the identified concepts or principles.
- A limited or vague rationale for the use of the learning experience to address the content topic.
- A limited or vague description of how this science concept or principle might be integrated into another content area.

The **LEVEL 1** response offers *little or no* evidence of the ability to use pedagogical and content knowledge of science to identify fundamental science-related concepts and/or principles of a given real-world phenomenon, including a cross-curricular concept, and provide a developmentally appropriate instructional learning experience that relates to the given real-world phenomenon.

Characteristics:

- Inaccurate identification of fundamental science concepts or principles related to a given real-world phenomenon.
- Weak or vague learning experience that may not be related to a developmentally appropriate and worthwhile hands-on learning experience that is related to the identified concept or principle or does not include instructional materials or may be inappropriate for student understanding of the identified concepts or principles.
- Little or no rationale for the use of the learning experience to address content topic.
- Little or no description of how this science concept or principle might be integrated into another content area.

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