

Early and Middle Childhood/ Physical Education

Component 1: Content Knowledge

SAMPLE ITEMS AND SCORING RUBRICS

NATIONAL BOARD
for Professional Teaching Standards®

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Overview

This document provides information about the Early and Middle Childhood/Physical Education (EMC/Physical Education) 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.

EMC/Physical Education Component 1 Computer-Based Assessment

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

EMC/Physical Education Standards Measured by Selected Response Items

The EMC/Physical Education selected response items focus on the following Standards:

Standards Content	Approximate Percentage of Selected Response Item Section*
Exercise Science (Standard II) <ul style="list-style-type: none">• Major muscle groups and functions• Biomechanical principles• Effects of physical activity on the human body, and exercise heart rate and recovery heart rate	35%
Motor Development, Motor Learning, and Movement Forms in Context (Standard II) <ul style="list-style-type: none">• Progression from beginning to mature motor patterns, including fine and gross motor skills• Developmentally appropriate movements and progressions• Critical elements that promote skill acquisition• Developmentally appropriate scope and sequence of movement forms	35%

Physical Activity and Wellness; Legal and Safety Issues (Standards II, IV) <ul style="list-style-type: none">• Health- and skill-related components of physical activity• FITT Principle guidelines and principles of exercise• Basic nutrition principles and guidelines• Comprehensive fitness, including hypokinetic conditions and the effect of behavioral choices on personal well-being• Legal and safety issues, including applicable laws and initiatives related to the successful participation of all students, including students with exceptionalities	30%
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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 EMC/Physical Education Standards, refer to www.boardcertifiedteachers.org.

EMC/Physical Education Constructed Response Exercises

The EMC/Physical Education constructed response exercises assess the following:

- **Exercise 1: Exercise Science**
In this exercise, you will use your knowledge of health-related fitness components and principles of exercise science to plan a developmentally appropriate physical education activity. You will be asked to respond to one prompt.
- **Exercise 2: Motor Learning and Movement Forms**
In this exercise, you will apply your knowledge of motor skills and movement concepts to teaching movement patterns associated with a physical activity. You will be asked to respond to one prompt.
- **Exercise 3: Physical Activity and Wellness**
In this exercise, you will analyze a scenario that describes a student's current physical activity levels or daily activities, and make recommendations for a wellness program that is appropriate for the student according to his or her needs, current situation, and age. You will be asked to respond to one prompt.

Each constructed response exercise will be assessed using a scoring rubric. Each EMC/Physical Education Component 1 scoring rubric is derived from the Physical Education Standards Second Edition For Teachers of Students 3–18+ 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 EMC/Physical Education Component 1" and "Sample Constructed Response Exercises and Scoring Rubrics for EMC/Physical Education 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 EMC/Physical Education 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**.

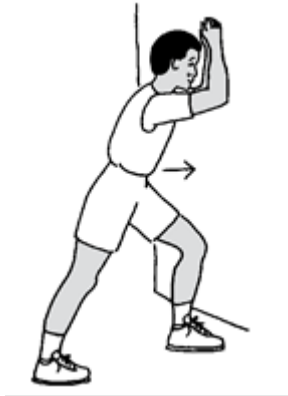
Sample Selected Response Items

1. Which of the following illustrations shows a stretch for safely increasing flexibility of the hip adductors?

A.



B.



C.



D.



2. The table below shows how a student paraphrased the effects of specific physical activities.

Activity	How It Helps
lunges, trunk lifts, dynamic stretching	helps me stay flexible
aerobic exercise for at least 30 minutes	helps keep my heart strong
modified and side planks, crunches	?

Which of the following phrases would best complete the student's table?

- A. helps prepare my muscles for exercise
- B. helps me manage my weight
- C. helps me stay active for longer without stopping
- D. helps strengthen my core muscles

3. In a physical education class, students are practicing two-handed strikes with foam-covered softball bats and softballs. Some students use batting tees while others self-toss and strike toward hoop targets. Which of the following techniques should the teacher emphasize to students as they practice the two-handed strike?

- A. rotating the hips and shoulders toward the target during the batting strike
- B. taking a step back and swinging the bat in a diagonal plane
- C. gripping the bat with the dominant hand below the nondominant hand
- D. following through so that the bat ends up directly in front of the body

4. During a movement exploration activity, a physical education teacher asks students to move slowly and then quickly, travel with light steps and then heavy steps, and make sudden movements and then sustained movements. Which movement quality or theme are the students most likely exploring?
- A. direction
 - B. relationships
 - C. pathways
 - D. effort

5. In a physical education class, sixth-grade students are beginning a project in which they will develop four-week personal fitness plans. Which of the following approaches would be most appropriate for the teacher to use *first* to help students develop their personal fitness plans?
- A. asking students to write about ways in which physical activity helps prevent obesity, heart disease, and diabetes
 - B. challenging students to develop draft fitness plans that include an even balance of cardiovascular endurance, muscular strength and endurance, and flexibility activities
 - C. working with students to determine realistic and measurable short- and long-term physical activity and fitness goals
 - D. involving students in self-assessing current fitness levels, positive and negative lifestyle factors affecting fitness, and individual health-related needs and strengths

Answer Key to Sample Selected Response Items

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

Sample Constructed Response Exercises and Scoring Rubrics for EMC/Physical Education 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: Exercise Science - Candidate Name		 Time Remaining 29:31
Exercise Science <u>Introduction</u>		
<p>In this exercise, you will use your knowledge of health-related fitness components and principles of exercise science to plan a developmentally appropriate physical education activity. 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">• a thorough and complete description of a learning experience that effectively integrates a specified fitness component and principle and would significantly promote student fitness;• an appropriate identification and description of student self-monitoring strategies and an insightful rationale for teaching them to students; and• an explanation that demonstrates deep understanding of developmentally appropriate physical education activities.		
<u>Directions</u>		
<p>You may view the prompt by clicking the Next button. Compose your response in the space provided.</p>		
? Help	⦿ Navigator	Next →

Exercise 1: Exercise Science - Candidate Name		 Time Remaining 29:31
<p>A physical education teacher has a fifth-grade class of heterogeneously grouped students. One of the teacher's primary goals is to incorporate health-related fitness components and principles of fitness into instruction. You must address each of the following in your response:</p>		
<ul style="list-style-type: none">• Thoroughly describe a developmentally appropriate learning experience for fifth graders that effectively integrates the health-related fitness component of flexibility and the fitness principle of progression.• Describe strategies that students can use to help monitor themselves during the activity and to monitor their progress over time with respect to flexibility. Explain the rationale for teaching students to use these strategies.• Explain why this learning experience is developmentally appropriate for fifth graders.		
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Scoring Rubric for Exercise 1

The **LEVEL 4** response shows *clear, consistent, and convincing* evidence that the candidate demonstrates thorough and complete knowledge of health-related fitness components and principles of exercise science, and an ability to plan developmentally appropriate physical education activities.

Characteristics:

- Description of a learning experience that effectively integrates a specified fitness component and principle and would significantly promote student fitness is detailed, appropriate, and thorough.
- Identified student self-monitoring strategies are complete and appropriate and rationale for teaching them to students is strong.
- Explanation demonstrates thorough and complete understanding of developmentally appropriate physical education activities.

The **LEVEL 3** response shows *clear* evidence that the candidate demonstrates thorough and complete knowledge of health-related fitness components and principles of exercise science, and an ability to plan developmentally appropriate physical education activities.

Characteristics:

- Description of a learning experience that effectively integrates a specified fitness component and principle and would significantly promote student fitness is appropriate.
- Identified student self-monitoring strategies are appropriate and rationale for teaching them to students is adequate.
- Explanation demonstrates sufficient understanding of developmentally appropriate physical education activities.

The **LEVEL 2** response shows *limited* evidence that the candidate demonstrates thorough and complete knowledge of health-related fitness components and principles of exercise science, and an ability to plan developmentally appropriate physical education activities.

Characteristics:

- Description of a learning experience that effectively integrates a specified fitness component and principle and would significantly promote student fitness is weak or inappropriate.
- Identified student self-monitoring strategies are incomplete or inappropriate and rationale for teaching them to students is weak.
- Explanation demonstrates limited understanding of developmentally appropriate physical education activities.

The **LEVEL 1** response shows *little or no* evidence that the candidate demonstrates thorough and complete knowledge of health-related fitness components and principles of exercise science, and an ability to plan developmentally appropriate physical education activities.

Characteristics:

- Description of a learning experience that effectively integrates a specified fitness component and principle and would significantly promote student fitness is inappropriate or missing.
- Identified student self-monitoring strategies are inappropriate or missing and rationale for teaching them to students is weak or missing.
- Explanation demonstrates minimal understanding of developmentally appropriate physical education activities or is missing.

Sample Exercise 2 and Scoring Rubric

Sample Exercise 2

Exercise 2: Motor Learning and Movement Forms - Candidate Name		⌚ Time Remaining 29:31
Motor Learning and Movement Forms		
<u>Introduction</u>		
In this exercise, you will apply your knowledge of motor skills and movement concepts to teaching movement patterns associated with a physical activity. You will be asked to respond to one prompt.		
<u>Criteria for Scoring</u>		
To satisfy the highest level of the scoring rubric, your response must provide clear, consistent, and convincing evidence of the following:		
<ul style="list-style-type: none">• an accurate explanation of how two particular skills apply to a given physical activity;• a thorough description of a learning experience that facilitates students' application of the skills and movement concepts to the activity and that demonstrates deep understanding of developmentally appropriate physical education; and• a description of appropriate adaptations to the instruction that would allow a given student to participate successfully in the activity.		
<u>Directions</u>		
You may view the prompt by clicking the Next button. Compose your response in the space provided.		
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Exercise 2: Motor Learning and Movement Forms - Candidate Name		⌚ Time Remaining 29:31
Students in a third-grade class have been practicing running and catching skills. You must address each of the following in your response:		
<ul style="list-style-type: none">• Explain how each of these skills is applicable to flag football.• Thoroughly describe a developmentally appropriate learning experience for facilitating students' application of the skills and identified movement concepts to flag football. Explain why this approach is developmentally appropriate for third graders.• Describe how you would adapt the skill instruction for a student with autism spectrum disorder so that he or she can participate successfully in the activity.		
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Scoring Rubric for Exercise 2

The **LEVEL 4** response shows *clear, consistent, and convincing* evidence that the candidate demonstrates a thorough knowledge of motor skills and movement concepts, an ability to apply this knowledge to the teaching of movement patterns associated with a physical activity, and an understanding of how physical activities can be adapted to meet the needs of all students.

Characteristics:

- Explanation of how two particular skills apply to a given physical activity is thorough and accurate.
- Description of a learning experience that facilitates students' application of the skills and movement concepts to the activity and that demonstrates deep understanding of developmentally appropriate physical education is appropriate and detailed.
- Description of adaptations to the instructions that would allow a given student to participate successfully in the activity is appropriate and thorough.

The **LEVEL 3** response shows *clear* evidence that the candidate demonstrates a thorough knowledge of motor skills and movement concepts, an ability to apply this knowledge to the teaching of movement patterns associated with a physical activity, and an understanding of how physical activities can be adapted to meet the needs of all students.

Characteristics:

- Explanation of how two particular skills apply to a given physical activity is accurate.
- Description of a learning experience that facilitates students' application of the skills and movement concepts to the activity and that demonstrates deep understanding of developmentally appropriate physical education is appropriate.
- Description of adaptations to the instructions that would allow a given student to participate successfully in the activity is appropriate.

The **LEVEL 2** response shows *limited* evidence that the candidate demonstrates a thorough knowledge of motor skills and movement concepts, an ability to apply this knowledge to the teaching of movement patterns associated with a physical activity, and an understanding of how physical activities can be adapted to meet the needs of all students.

Characteristics:

- Explanation of how two particular skills apply to a given physical activity is somewhat inaccurate.
- Description of a learning experience that facilitates students' application of the skills and movement concepts to the activity and that demonstrates deep understanding of developmentally appropriate physical education is not completely appropriate.
- Description of adaptations to the instructions that would allow a given student to participate successfully in the activity is not completely appropriate.

The **LEVEL 1** response shows *little or no* evidence that the candidate demonstrates a thorough knowledge of motor skills and movement concepts, an ability to apply this knowledge to the teaching of movement patterns associated with a physical activity, and an understanding of how physical activities can be adapted to meet the needs of all students.



Characteristics:

- Explanation of how two particular skills apply to a given physical activity is inaccurate or missing.
- Description of a learning experience that facilitates students' application of the skills and movement concepts to the activity and that demonstrates deep understanding of developmentally appropriate physical education is inappropriate or missing.
- Description of adaptations to the instructions that would allow a given student to participate successfully in the activity is inappropriate or missing.

Sample Exercise 3 and Scoring Rubric

Sample Exercise 3

Exercise 3: Physical Activity and Wellness - Candidate Name		⌚ Time Remaining 29:31
Physical Activity and Wellness		
<u>Introduction</u>		
<p>In this exercise, you will analyze a scenario that describes a student's current physical activity levels or daily activities, and make recommendations for a wellness program that is appropriate for the student according to his or her needs, current situation, and age. 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">• a detailed explanation of how fitness and nutrition affect students in their daily lives and long-term well-being;• a comprehensive understanding of age-appropriate wellness programs; and• a thorough knowledge of critical elements of student fitness and wellness, including health- and skill-related fitness components.		
<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: Physical Activity and Wellness - Candidate Name		 Time Remaining 29:31
Stimulus		
<p>The following describes a fifth-grade student at your school.</p> <p>Max is a 10-year-old who rides a bus to attend a science, technology, engineering, and math (STEM) magnet school located 10 miles from his home. He participates in physical education classes twice each week but is not engaged in any extracurricular physical activities. Max eats the breakfast and lunch provided at school, and he typically brings snacks from home consisting of chips or cookies to eat during recess. He is interested in technology, well-liked by his peers, and prefers to spend his free time playing video games with his friends. He has an older brother who plays in a local soccer league, and both of his parents work outside of the home. Max is proficient in locomotor and manipulative skills but demonstrates some difficulty with balance and agility. His baseline fitness assessment results are as follows: VO_2 max: 37.6; body composition: 23.2 (body mass index), 37.8% (body fat percentage); abdominal curl-up: 5 repetitions; trunk lift: 11 inches; push-up: 2 repetitions; sit and reach: 9 inches.</p>		
<ul style="list-style-type: none">• Evaluate the student's habits and their likely short- and long-term effects on wellness. Identify two areas in which change is needed.• Prescribe a wellness program that best meets the needs of the student. Explain how the program applies the FITT Principle.• Describe how to facilitate this student's personalized evaluation and how the student can monitor his progress.		
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Scoring Rubric for Exercise 3

The **LEVEL 4** response shows *clear, consistent, and convincing* evidence that the candidate demonstrates an ability to analyze a scenario that describes a student's current physical activity levels or daily activities, and make recommendations for a wellness program that is appropriate for the student according to his or her needs, current situation, and age.

Characteristics:

- Explanation of how fitness and nutrition affect students in their daily lives and long-term well-being is thorough and accurate.
- Understanding of age-appropriate wellness programs is comprehensive and detailed.
- Knowledge of critical elements of student fitness and wellness, including health and skill related fitness components, is comprehensive and accurate.

The **LEVEL 3** response shows *clear* evidence that the candidate demonstrates an ability to analyze a scenario that describes a student's current physical activity levels or daily activities, and make recommendations for a wellness program that is appropriate for the student according to his or her needs, current situation, and age.

Characteristics:

- Explanation of how fitness and nutrition affect students in their daily lives and long-term well-being is accurate and somewhat detailed.
- Understanding of age-appropriate wellness programs is fairly comprehensive.
- Knowledge of critical elements of student fitness and wellness, including health and skill related fitness components, is fairly comprehensive and mostly accurate.

The **LEVEL 2** response shows *limited* evidence that the candidate demonstrates an ability to analyze a scenario that describes a student’s current physical activity levels or daily activities, and make recommendations for a wellness program that is appropriate for the student according to his or her needs, current situation, and age.

Characteristics:

- Explanation of how fitness and nutrition affect students in their daily lives and long-term well-being is limited and somewhat inaccurate.
- Understanding of age-appropriate wellness programs is weak.
- Knowledge of critical elements of student fitness and wellness, including health and skill related fitness components, is minimal.

The **LEVEL 1** response shows *little or no* evidence that the candidate demonstrates an ability to analyze a scenario that describes a student’s current physical activity levels or daily activities, and make recommendations for a wellness program that is appropriate for the student according to his or her needs, current situation, and age.

Characteristics:

- Explanation of how fitness and nutrition affect students in their daily lives and long-term well-being is inaccurate or missing.
- Understanding of age-appropriate wellness programs is misinformed or missing.
- Knowledge of critical elements of student fitness and wellness, including health and skill related fitness components, is inaccurate or missing.

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The National Board for Professional Teaching Standards, Inc. has been funded in part with grants from the U.S. Department of Education and the National Science Foundation. The contents of this publication do not necessarily represent the policy of the U.S. Department of Education or the National Science Foundation, and you should not assume endorsement by the Federal Government. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the sponsors.

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