

# ***Early Adolescence– Adolescence and Young Adulthood/Mathematics***

## **Component 3: Teaching Practice and Learning Environment**

## **PORTFOLIO INSTRUCTIONS AND SCORING RUBRIC**

### **FIELD TEST**

This NBPTS Field Test document is valid from January to September 2015.

Content in the final operational version of the *Component 3 Portfolio Instructions and Scoring Rubric* to be published in October 2015 will fully supersede all instructions, statements, and positions contained in this Component 3 Field Test document.

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## Overview

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This document provides information about the Early Adolescence–Adolescence and Young Adulthood/Mathematics (EA-AYA/Mathematics) Component 3 portfolio entry, instructions on how to develop and submit your evidence, and the scoring rubric used to assess your work.

### Component 3: Teaching Practice and Learning Environment

This portfolio entry captures details about your instructional planning, direct evidence of your practice from two video recordings and instructional materials, and your analysis of and reflection on your teaching as displayed in two video recordings. You will be evaluated on the demonstrated evidence of your practice and analysis as it relates to instruction, student engagement, and the learning environment. This portfolio entry and the rubric used to assess your submission are aligned with the Five Core Propositions and the certificate area Standards.

### EA-AYA/Mathematics Component 3 Portfolio Entry

In the EA-AYA/Mathematics Component 3: Teaching Practice and Learning Environment portfolio entry:

- You provide a brief overview of the content of your overall submission.
- You submit two 10–15 minute videos of your teaching practice, showcasing different instructional units, content, and strategies in each.
- You submit a completed Instructional Context Form for each video (refer to the “[Component 3 Forms](#)” section of this document).
- You describe your instructional planning for the lesson featured in each video and submit appropriate supporting materials.
- You submit a commentary for each video that includes analysis and reflection on your teaching practice; that communicates your pedagogical decision making before, during, and after the lesson shown in the video; and that focuses on your impact on student learning.

### EA-AYA/Mathematics Standards Measured by Component 3

Because the purpose of the tasks in the portfolio components is to measure your teaching practice, the overall focus of the portfolio entries and rubrics is on your pedagogical knowledge and skills and how successfully you are able to apply these knowledge and skills to advance student learning.

The portfolio entry for this component, “Teaching Practice and Learning Environment,” measures the following Mathematics Standards, and your submission will be evaluated based on these standards through the scoring rubric.

- I. Commitment to Mathematics Learning of All Students
- II. Knowledge of Mathematics
- III. Knowledge of Students
- IV. Knowledge of the Practice of Teaching
- V. Learning Environment

- VI. Ways of Thinking Mathematically
- VII. Assessment
- VIII. Reflection and Growth
- IX. Families and Communities
- X. Professional Community

For the complete Mathematics Standards, refer to **[www.boardcertifiedteachers.org](http://www.boardcertifiedteachers.org)**.

The EA-AYA/Mathematics Component 3 scoring rubric defines the level of accomplished teaching that you must demonstrate. The wording in the rubric reflects levels of performance within the Component 3 tasks.

You should read the Standards and the rubric while developing your portfolio entry to understand how the rubric guides assessors in evaluating your work.

## Inside This Document

This document includes the following two sections: "[Portfolio Instructions for EA-AYA/Mathematics Component 3](#)," which describes how to develop and submit your evidence, and "[Scoring Rubric for EA-AYA/Mathematics Component 3](#)," which provides the scoring rubric used to assess your work.

### Portfolio Instructions

The EA-AYA/Mathematics Component 3 portfolio instructions provide the following:

- Directions for developing and submitting your evidence of accomplished teaching.
- Forms required for this entry. As you prepare your portfolio, keep in mind some forms contain directions that are not repeated elsewhere; follow these directions carefully.
- An Electronic Submission at a Glance chart listing the materials you collect and/or prepare as well as the release forms to keep for your records. Submitting complete and appropriate materials is essential for proper scoring of your portfolio entry.

For more information about developing and submitting your portfolio entry, please refer to the *General Portfolio Instructions* and the *Guide to Electronic Submission* available at **[www.boardcertifiedteachers.org](http://www.boardcertifiedteachers.org)**.

### Scoring Rubric

The EA-AYA/Mathematics Component 3 scoring rubric is provided to assist you in understanding how your portfolio materials will be assessed. For more information about understanding and interpreting your scores, please refer to the *Scoring Guide* available at **[www.boardcertifiedteachers.org](http://www.boardcertifiedteachers.org)**.

# Portfolio Instructions for EA–AYA/Mathematics

## Component 3

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This section contains the directions for developing and submitting the Component 3 EA–AYA/Mathematics portfolio entry and assembling it for submission. Entry directions include

- suggestions for planning your portfolio entry and choosing evidence of your teaching practice;
- an explanation of how to format, assemble, and submit your portfolio entry;
- questions that must be answered as part of your submission.

### What Do I Need to Do?

This entry captures your ability to integrate the domains of mathematics and your development of students' abilities to engage with you and with each other in meaningful mathematics discourse. Each of the two videos you submit should show you and your students engaged in a topic or concept or addressing a problem that is directly related to your instructional goal(s).

Identify two lessons for which you will provide information about your instructional planning and choice of materials and will capture video that shows evidence of your teaching practice, the learning environment, and student engagement. Together the two lessons should demonstrate a breadth of content in mathematics and different instructional formats (e.g., large group, small group) and strategies.

In this entry, you

- describe your learning goals and demonstrate instructional planning appropriate to the students, content, and context for two lessons from different instructional units;
- demonstrate the teaching strategies that you use to help students meet the learning goals;
- provide your analysis of your students' growth and development as individuals who can reason and think mathematically, formulate and solve problems, justify and communicate conclusions, and question and extend those conclusions.
- explain how the entire entry, taken together, is indicative of your instruction of mathematics.

### What Do I Need to Submit?

For this entry you must submit the evidence described in this section. Refer to the "[Component 3 Electronic Submission at a Glance](#)" chart in this document for detailed information.

- **Introduction to the Entry.** Submit a completed Introduction to Entry Form in which you provide a brief overview of your entire entry (**no more than 1 page**). Describe the focus of Video 1 and the focus of Video 2 and your rationale for including this pair of videos in your portfolio submission.

- **Instructional Context.** For each video, submit a completed Instructional Context Form (**no more than 1 page for each video—2 pages total**) in which you provide information about your teaching context (e.g., school, program, schedule) and the students in the class featured in each video:
  - social and physical context (e.g., available resources such as technology, scheduling of classes, room allocation—own or shared space)
  - state and/or district mandates
  - student demographics of the classes featured in the videos (e.g., ethnic, cultural, and linguistic diversity; the range of abilities and the cognitive, social/behavioral, attentional, sensory, and/or physical challenges of your students)For clarity, spell out the first occurrence of acronyms.
- **Videos.** Create two video recordings (**10–15 minutes each**) from two different instructional units. The two video recordings submitted for Component 3 and the student work samples submitted for Component 2 must be from different lessons.
- **Instructional Planning and Materials.** For each video, submit one or more instructional materials (**no more than 3 pages total**) and a completed Instructional Planning Form (**no more than 1 page**) in which you provide the following:
  - the unit of instruction
  - the instructional goals for the unit
  - goals for the lesson featured in the video
  - the instructional format chosen for the lesson
  - a description of the materials or resources used
  - an accompanying description (**up to 2 pages**) of your instructional planning and instructional strategies, and rationales for your choice of goals, strategies, and materials
- **Analysis and Reflection.** For each video, write a commentary (**no more than 4 pages each**) on the instruction captured in the video, your decision making, and your reflection on the lesson after its completion.

It may be helpful to have a colleague review your work before you submit it. However, all of the work you submit as part of your response to this entry must be yours and yours alone. The written analyses and other evidence you submit must feature teaching that you did and work that you oversaw. For more detailed information, see the ethics and collaboration section in *General Portfolio Instructions* and the National Board’s ethics policy.

Before beginning to work on this entry, read the following directions for developing each element. Refer to the “[Component 3 Forms](#)” section of this document for the forms you will need to submit your materials. Word-processing files of these forms are also available to download from **[www.boardcertifiedteachers.org](http://www.boardcertifiedteachers.org)**.

## Planning and Selecting Instructional Materials

### Writing about Planning

Complete the Instructional Planning Form (**no more than 1 single-spaced page for each video**, using 11-point Arial font), and write a description (**no more than 2 double-spaced pages for each video**, using 11-point Arial font) of your instructional planning and decision making for promoting student learning in the context of the lesson featured in the video. In your description, be sure to address the following questions:

- *In the Instructional Context Form, you identified your students' characteristics. How did you use detailed knowledge of your students' backgrounds, needs, abilities, and interests and your knowledge of mathematics in your planning and choice of strategies? What are the instructional challenges represented by your students?*
- *How did the social and physical context you described influence your planning?*
- *What are your long-term instructional goals for this class, and why are these goals appropriate for these students?*
- *How do the instructional goals for this particular lesson fit into your long-term goals?*
- *What is your rationale for choosing the instructional format that you used to meet the goals of this lesson?*
- *What are your reasons for selecting the materials or resources you used?*

### Selecting Instructional Materials

Include instructional materials that will help an assessor understand the lesson in the video recording (handouts, excerpts from teacher guides, instructions to students, etc.). You or your students may have used these materials before, during, or after the activity featured on the video recording.

### How to Format and Submit Your Instructional Materials

- Complete a new Instructional Planning Form (**no more than 1 page each**) for each video (refer to the "[Component 3 Forms](#)" section of this document). Use single-spaced 11-point Arial font. Include the following after each form in your file for submission:
  - associated description of your instructional planning and strategies (**no more than 2 pages**); use double-spaced 11-point Arial font with 1" margins on all sides
  - one or more instructional materials (**no more than 3 pages total**)
- Be sure that your instructional materials are legible and refer to people and places in ways that preserve anonymity. Follow the "Guidelines for Referring to People, Institutions, and Places" section in *General Portfolio Instructions*.
- Place your candidate ID number on the Instructional Planning Form.
- Format your instructional materials to fit onto an 8.5" × 11" page. If instructional materials contain Web pages, each 8.5" × 11" Web page print out or PDF counts as **1 page** toward your page total. Note, however, the following exceptions:
  - If instructional materials were created in a multimedia software program, you may format up to six slides on one 8.5" × 11" page, which counts as **1 page** toward your page total.

- If submitting smaller items (including photos and images, but not text), you may format up to six smaller items on one 8.5" × 11" page as long as they are readable, which counts as **1 page** toward your page total.
- If instructional materials that are important for assessors to see are impractical to submit or do not show up clearly in the video recording (e.g., slide projections, writing on a chalkboard or whiteboard, software, three-dimensional objects), submit a digitized drawing, image, or photograph, or a description/transcription of the material. (If you submit a description/transcription, it must be typed in double-spaced text with 1" margins on all sides using 11-point Arial font. The description/transcription will count as part of your page total.)

Refer to the "[Component 3 Electronic Submission at a Glance](#)" chart in this document for page totals for each piece of evidence and how to assemble instructional materials for submission.

## Recording Your Videos

Follow the guidelines below for each of your two video recordings. Remember, the two videos must feature different lessons and units of instruction. The lessons featured in the videos should be independent of one another and be able to stand alone as evidence of your teaching practice. The video recordings can be made using the same class of students or different classes of students.

While it is not necessary to show a full range of content coverage and instructional approaches in a single video, the two videos combined should represent a breadth of the content area, showcasing integration of domains of mathematics as appropriate to each lesson. Different instructional formats (e.g., large group, small group) and strategies should also be represented in the two videos.

One of the two video recordings submitted for Component 3 and the student work samples submitted for Component 2 may be from the same unit of instruction, but must be from different lessons that have unique lesson goals and objectives.

### Selecting the Class for Each Video

Choose the class to feature in each of your video recordings. Since your response will be considered on the basis of how you support students engaged in purposeful mathematics learning, the class you choose should provide the best opportunity to feature your practice. The focus is on your practice and your ability to facilitate student learning, not on the level of student achievement.

A signed release form is required for each student or adult who appears and/or speaks in the video recordings. These release forms are available as PDF downloads from [www.boardcertifiedteachers.org](http://www.boardcertifiedteachers.org). Retain completed release forms for your records; do not submit them with your evidence.

### Selecting a Lesson for Each Video

Select a lesson for each video recording that provides opportunities for your students to engage in meaningful mathematics discourse. The lesson should show how you develop students' abilities to make connections among mathematical ideas and to apply these ideas to problem solving in mathematics, in other disciplines, and in the world outside of school. The objectives need not be advanced, but the lesson on which you are focusing should be one that is important for the students at their level of learning and one in which they are likely to be engaged in constructive and meaningful discourse.



As you determine which lesson to feature in each video, consider how you will provide evidence of the following aspects of your teaching practice. These observable actions are derived from the Mathematics Standards, to which you should refer for full guidance.

- Learning Environment
  - Establish a safe, fair, equitable, and challenging environment that promotes active student engagement in the activities and substance of mathematics instruction.
  - Create a student-centered learning environment based on trust and mutual respect.
  - Equip students with skills that support collaboration, such as the ability to ask thoughtful questions, listen to one another, and respond respectfully to others' ideas and mathematical arguments.
- Student Engagement
  - Foster the active engagement of students with the teacher and each other in sharing ideas, conversing purposefully, and listening attentively as they explore significant mathematics topics.
  - Design and implement opportunities for students to engage in self-directed learning and to engage in meaningful expression.
- Instruction
  - Integrate prior student knowledge with mathematical activities that are connected to learning goals; and sequence and structure instruction so that students can achieve the goals.
  - Support all students in developing the dispositions and proficiencies necessary to use mathematical reasoning, to solve problems, and to communicate and extend conclusions.
  - Facilitate the inquiry process for students by delineating possible pathways for investigation and modeling the inquiry process.
  - Use appropriate, rich, and thought-provoking instructional resources to engage students in learning important mathematics content.
  - Monitor and evaluate student learning, make instructional adjustments as part of an ongoing process of assessment, and provide regular constructive feedback to students.

### Selecting Your Video Recordings

Each video recording you submit must be made during a *single class period*. You may wish to record a number of different class periods so that you have several recordings from which to choose.

Each final video you submit should be 10–15 minutes long. Be sure to choose video recordings that give you an opportunity to discuss your practice. It is important to show how you create a positive learning environment, engage students, and facilitate students' learning.

Note that while submitting each video recording in a continuous and unedited format may provide the most authentic representation of your teaching practice, you may make edits to the video to reduce the impact of the following breaks in your selected recording:

- classroom transitions (moving from whole class to small group, from one small group setting to another, from classroom to lab, etc.)
- non-instructional events (fire drill, lunch break, classroom announcement, etc.)
- technical difficulties (loss of power, camera malfunction, etc.)

Each video may include **up to two edits** to remove such transitional or non-instructional time. If either of your videos includes one or two edits, you must note the reason for each on the Instructional Planning Form. If you submit a video with more than two edits, only the portion prior to the third edit will be viewed and scored.

You may NOT make edits to your video recording such as creating an introduction, adding captions, or using features such as fade in/fade out that detract from an authentic presentation of your classroom environment.

### How to Format and Submit Your Videos

- Submit two video recordings (**10–15 minutes each**) from two different instructional units. If you submit longer video recordings, only the first 15 minutes will be viewed and scored.
- If your video recordings contain edits to transition from one location to another, assessors will only view the recordings up to the third transition (only two edits per video are allowed).
- Compress larger video files before submission. Refer to the *Guide to Electronic Submission* for complete video submission requirements.
- Use a camera angle that includes as many faces of the students in the class as possible. The video recording should show as much of the class as possible, but it is acceptable to focus on a particular student while he or she is talking. To score your video entries, assessors must be able to see and hear what is going on in the classroom, and verify that you are identifiable in the recording.
- If a small portion of your video occurs in a language other than English and it is important that an assessor understand it, provide a brief description in the Analysis and Reflection of what was communicated.

Refer to the "[Component 3 Electronic Submission at a Glance](#)" chart in this document for a list of video file types acceptable for submission.

### Composing Analysis and Reflection

In this entry, you submit an Analysis and Reflection on the instruction captured in the video and your decision making as well as your reflection on the lesson after its completion. When citing evidence, it may be helpful to assessors if you identify specific locations in the video recording by describing specific dialogue, events, and/or students (e.g., "the girl in the green sweater in the second row"). In addition to a description, you may also provide a time-stamp reference to help assessors, if necessary.

## How to Organize and Present Your Analysis and Reflection

- Create a word-processing document to compose your Analysis and Reflection.
- Address the italicized questions in the following section entitled “What to Include in Your Analysis and Reflection.”
- Refer to the “Writing about Teaching” section in *General Portfolio Instructions* for advice on developing your Analysis and Reflection and to see examples.
- When writing your Analysis and Reflection, refer to people and places in ways that preserve anonymity. Follow the “Guidelines for Referring to People, Institutions, and Places” section in *General Portfolio Instructions*.
- Place your candidate ID number in the upper right corner of the first page of your Analysis and Reflection document.
- Use the following language and format specifications when writing your Analysis and Reflection:
  - Write in English.
  - Use double-spaced 11-point Arial font.
  - Format 1-inch margins on all sides of the document.

Refer to the “Component 3 Electronic Submission at a Glance” chart in this document for complete submission requirements.

- Your Analysis and Reflection will be scored based on its content; however, you should proofread your writing for spelling, mechanics, and usage.
- Submit a document for your Analysis and Reflection of **no more than 4 double-spaced pages for each video**. If you submit a longer document, only the first 4 pages will be scored.

## What to Include in Your Analysis and Reflection

In your Analysis and Reflection, be sure to address the following questions:

- *How did the pedagogical and instructional decisions you made during the lesson align with your planning?*
- *What specific approaches, strategies, techniques, or activities did you use to promote active student engagement in the lesson? Cite specific examples from the video recording.*
- *How did you establish a safe, fair, equitable, and challenging learning environment for all students?*
- *How did you monitor and assess student progress during the lesson and how did this influence your decision making during instruction? How was student feedback provided and what was your rationale for providing it in this manner?*
- *To what extent did you achieve the lesson’s goal or goals? Provide evidence from the video recording to support your answer. What were your next steps with these students as a result?*
- *How was your approach to teaching this content to the students in this video influenced by past experience?*
- *What would you do differently, if anything, if you were to teach this particular lesson again to a similar group of students next year? If you would not change anything, explain why.*

## Component 3 Electronic Submission at a Glance

Submit your evidence of accomplished teaching using the electronic portfolio management system (see the *Guide to Electronic Submission*). Use the following chart to determine how to group your evidence and submit it electronically. Forms are available as word-processing files for you to download from [www.boardcertifiedteachers.org](http://www.boardcertifiedteachers.org) as well as on the following pages of this document.

EA–AYA/Mathematics Component 3: Teaching Practice and Learning Environment				
What to Submit	Supported File Types	Number of Files to Submit	Response Length	Additional Information
<b>Introduction to Entry Form</b> (form provided)	doc, docx, odt, or pdf	1	<b>No more than 1 page</b>	<ul style="list-style-type: none"> <li>• Use 11-point Arial font</li> <li>• Single space</li> </ul>
<b>Instructional Context Form</b> (form provided)	doc, docx, odt, or pdf	1	<b>No more than 1 page for each video—2 pages total</b>	<ul style="list-style-type: none"> <li>• Use 11-point Arial font</li> <li>• Single space</li> </ul>
<b>Videos</b>	flv, asf, qt, mov, mpg, mpeg, avi, wmv, mp4, or m4v	2	Running time <b>10–15 minutes each</b>	<ul style="list-style-type: none"> <li>• A signed release form is required for each student or adult who appears and/or speaks in the video recordings.</li> <li>• Refer to the <a href="#">“Recording Your Videos”</a> section of this document for video content and requirements.</li> <li>• When naming each file, include “Video 1” and “Video 2,” as appropriate</li> </ul>
<b>Instructional Planning Form and Materials</b> (form provided)	doc, docx, odt, or pdf	2	Submit 1 file for each video. In each file, include: <ul style="list-style-type: none"> <li>• Completed Instructional Planning Form, <b>no more than 1 single-spaced page</b></li> <li>• <b>No more than 2 double-spaced pages</b> of description with 1" margins on all sides</li> <li>• Associated instructional materials: one or more items, <b>no more than 3 pages total</b></li> </ul>	<ul style="list-style-type: none"> <li>• Use 11-point Arial font</li> <li>• When naming each file, include “Video 1” and “Video 2,” as appropriate</li> </ul>
<b>Analysis and Reflection</b>	doc, docx, odt, or pdf	2	Submit 1 file for each video, <b>no more than 4 pages each</b>	<ul style="list-style-type: none"> <li>• Use 11-point Arial font</li> <li>• Double space with 1" margins on all sides</li> <li>• When naming each file, include “Video 1” and “Video 2,” as appropriate</li> </ul>

Release forms are available as PDF downloads from [www.boardcertifiedteachers.org](http://www.boardcertifiedteachers.org). **Retain completed release forms for your records; do not submit them with your evidence.**

## Component 3 Forms

This section contains the forms required for Component 3. You must download the word-processing files available at **www.boardcertifiedteachers.org**, fill them out electronically, and then upload the electronic file or scanned image with any associated evidence to the electronic portfolio management system.

As you prepare your portfolio, keep in mind some forms contain directions that are not repeated elsewhere; follow these directions carefully.

A signed release form is required for each student or adult who appears and/or speaks in the video recordings. These release forms are available as PDF downloads from **www.boardcertifiedteachers.org**.

## Introduction to Entry Form

**Directions:** Respond to the prompts below (**no more than 1 single-spaced page in Arial 11-point font, including prompts**) by typing your responses within the brackets following each prompt. Do not delete or alter the prompts; both the prompts and your responses are included in the total page count allowed. Pages exceeding the maximum will not be scored.

**Candidate ID#:** [ ]

1. Provide a brief overview of your entire entry.

[ ]

2. Describe the focus of Video 1 and your rationale for including this video in your portfolio submission.

[ ]

3. Describe the focus of Video 2 and your rationale for including this video in your portfolio submission.

[ ]

## Instructional Context Form

**Directions:** For each video, respond to the prompts below (**no more than 1 single-spaced page in Arial 11-point font, including prompts**) by typing your responses within the brackets following each prompt. Do not delete or alter the prompts; both the prompts and your responses are included in the total page count allowed. Pages exceeding the maximum will not be scored. Please spell out the first occurrence of acronyms.

**Video #:** [ ]

**Candidate ID#:** [ ]

1. Briefly identify the **type of school/program** in which you teach and the **grade/subject configuration** (single grade, departmentalized, interdisciplinary teams, etc.).  
[ ]
2. Briefly identify. Grades: [ ] Age Levels: [ ]  
Number of Students Taught Daily: [ ] Average Number of Students in Each Class: [ ]  
Courses: [ ]
3. Describe the social and physical context that influenced your instructional choices (available resources such as technology, scheduling of classes, room allocation—own or shared space—etc.).  
[ ]
4. Identify state and/or district mandates you must adhere to that influenced your instruction.  
[ ]
5. Identify the number, ages, and grades of students in the class featured in this video and the subject matter of the class.  
[ ]
6. Describe the relevant characteristics of this class that influenced your instructional planning, format, and strategies for this lesson (e.g., ethnic, cultural, and linguistic diversity; the range of abilities of the students; the cognitive, social/behavioral, attentional, sensory, and/or physical challenges of students with exceptional needs; the personality of the class).  
[ ]

## Instructional Planning Form

### Directions for each video:

1. Respond to the prompts below (**no more than 1 single-spaced page in Arial 11-point font, including prompts**) by typing your responses within the brackets following each prompt. Do not delete or alter the prompts; both the prompts and your responses are included in the total page count allowed.
2. Include a description of your instructional planning and strategies (**no more than 2 double-spaced pages in 11-point Arial font with 1" margins on all sides**) and rationales for your choice of goals, strategies, and materials. **Use the questions in “Writing about Planning” to guide your description.**
3. Include **no more than 3 pages** of instructional materials with this form. Pages exceeding the maximum will not be scored.

**Video #:** [ ]

**Candidate ID#:** [ ]

1. Indicate the unit of instruction.

[ ]

2. Indicate the instructional goals for the unit.

[ ]

3. Indicate the goals for the lesson featured in the video.

[ ]

4. Indicate the instructional format chosen for the lesson.

[ ]

5. Describe the materials or resources used in the lesson.

[ ]

6. If this video contains 1–2 allowable edits, please describe the reasons for these transitions.

[ ]



## Scoring Rubric for EA–AYA/Mathematics Component 3

### Level 4

The **LEVEL 4** performance provides *clear, consistent, and convincing* evidence that the teacher is able to establish a safe, fair, equitable, and challenging environment that fosters the active engagement of students with the teacher and with each other in sharing ideas and in exploring significant mathematics topics, effectively integrating prior student knowledge with mathematical activities that are connected to learning goals.

**The Level 4 performance provides *clear, consistent, and convincing* evidence:**

- that the teacher has established a safe, fair, equitable, and challenging environment that promotes self-directed learning and active student engagement with the teacher and other students in sharing ideas, conversing purposefully, and listening attentively during activities as students explore topics of substance.
- that the teacher creates a student-centered learning environment based on trust and mutual respect, facilitates the inquiry process, and equips students with skills that support collaboration, such as the ability to ask thoughtful questions, respond respectfully to others' ideas, build consensus, compromise, negotiate, and accept ambiguity.
- that the teacher monitors and evaluates student learning, makes instructional adjustments as part of an ongoing process of assessment, and provides regular constructive feedback to students.
- that the teacher supports all students in developing the dispositions and proficiencies necessary to use mathematical reasoning, to solve problems, and to communicate and extend conclusions.
- that the teacher integrates prior student knowledge with mathematical activities that are connected to the learning goals, and sequences and structures instruction so that students can achieve the goals.
- that the teacher draws on detailed knowledge of students' backgrounds, needs, abilities, and interests, and on her or his own knowledge of mathematics in selecting high, worthwhile, and attainable goals and in selecting instructional approaches and instructional resources that support these goals.
- that the teacher communicates persuasively about the pedagogical decisions made before, during, and after instruction; describes her or his practice accurately; analyzes it fully and thoughtfully; reflects insightfully on its implications for future teaching; and strategically seeks ways to improve practice to promote student learning.

Overall, there is *clear, consistent, and convincing* evidence of establishing a safe, fair, equitable, and challenging environment that fosters the active engagement of students with the teacher and with each other in sharing ideas and in exploring significant mathematics topics, effectively integrating prior student knowledge with mathematical activities that are connected to learning goals.

## Level 3

The **LEVEL 3** performance provides *clear* evidence that the teacher is able to establish a safe, fair, equitable, and challenging environment that fosters the active engagement of students with the teacher and with each other in sharing ideas and in exploring significant mathematics topics, effectively integrating prior student knowledge with mathematical activities that are connected to learning goals.

### **The Level 3 performance provides *clear* evidence:**

- that the teacher has established a safe, fair, equitable, and challenging environment that promotes self-directed learning and active student engagement with the teacher and other students in sharing ideas, conversing purposefully, and listening attentively during activities as students explore topics of substance.
- that the teacher creates a student-centered learning environment based on trust and mutual respect, facilitates the inquiry process, and equips students with skills that support collaboration, such as the ability to ask thoughtful questions, respond respectfully to others' ideas, build consensus, compromise, negotiate, and accept ambiguity.
- that the teacher monitors and evaluates student learning, makes instructional adjustments as part of an ongoing process of assessment, and provides regular constructive feedback to students.
- that the teacher supports all students in developing the dispositions and proficiencies necessary to use mathematical reasoning, to solve problems, and to communicate and extend conclusions.
- that the teacher integrates prior student knowledge with mathematical activities that are connected to the learning goals, and sequences and structures instruction so that students can achieve the goals. However, there may be minor lapses in sequencing or some awkwardness in integration.
- that the teacher draws on knowledge of students' backgrounds, needs, abilities, and interests, and on her or his own knowledge of mathematics in selecting high, worthwhile, and attainable goals and in selecting instructional approaches and instructional resources that support these goals.
- that the teacher communicates effectively about the pedagogical decisions made before, during, and after instruction; describes her or his practice accurately; analyzes it fully; reflects on its implications for future teaching; and strategically seeks ways to improve practice to promote student learning.

Overall, there is *clear* evidence of establishing a safe, fair, equitable, and challenging environment that fosters the active engagement of students with the teacher and with each other in sharing ideas and in exploring significant mathematics topics, effectively integrating prior student knowledge with mathematical activities that are connected to learning goals.

## Level 2

The **LEVEL 2** performance provides *limited* evidence that the teacher is able to establish a safe, fair, equitable, and challenging environment that fosters the active engagement of students with the teacher and with each other in sharing ideas and in exploring significant mathematics topics, effectively integrating prior student knowledge with mathematical activities that are connected to learning goals.

### **The Level 2 performance provides *limited* evidence:**

- that the teacher has established a safe, fair, equitable, and challenging environment that promotes self-directed learning and student engagement with the teacher and other students in sharing ideas, conversing, and listening during activities as students explore topics of substance.
- that the teacher creates a student-centered learning environment, facilitates the inquiry process, and equips students with skills that support collaboration, such as the ability to ask thoughtful questions, respond respectfully to others' ideas, build consensus, compromise, negotiate, and accept ambiguity.
- that the teacher monitors and evaluates student learning, makes instructional adjustments as part of an ongoing process of assessment, and provides regular feedback to students.
- that the teacher supports students in developing the dispositions and proficiencies necessary to use mathematical reasoning, to solve problems, and to communicate and extend conclusions.
- that the teacher integrates prior student knowledge with mathematical activities that are connected to the learning goals, and sequences and structures instruction so that students can achieve the goals.
- that the teacher draws on knowledge of students' backgrounds, needs, abilities, and interests, and on her or his own knowledge of mathematics in selecting goals and in selecting instructional approaches and instructional resources that support these goals.
- that the teacher communicates adequately about the pedagogical decisions made before, during, and after instruction; describes her or his practice accurately; analyzes it; reflects on its implications for future teaching; and seeks ways to improve practice to promote student learning.

Overall, there is *limited* evidence of establishing a safe, fair, equitable, and challenging environment that fosters the active engagement of students with the teacher and with each other in sharing ideas and in exploring significant mathematics topics, effectively integrating prior student knowledge with mathematical activities that are connected to learning goals.

## Level 1

The **LEVEL 1** performance provides *little or no* evidence that the teacher is able to establish a safe, fair, equitable, and challenging environment that fosters the active engagement of students with the teacher and with each other in sharing ideas and in exploring significant mathematics topics, effectively integrating prior student knowledge with mathematical activities that are connected to learning goals.

### **The Level 1 performance provides *little or no* evidence:**

- that the teacher has established a safe, fair, equitable, and challenging environment that promotes self-directed learning and student engagement with the teacher and other students in sharing ideas, conversing, and listening during activities as students explore topics.
- that the teacher creates a student-centered learning environment, facilitates the inquiry process, and equips students with skills that support collaboration, such as the ability to ask thoughtful questions, respond respectfully to others' ideas, build consensus, compromise, negotiate, and accept ambiguity.
- that the teacher monitors and evaluates student learning, makes instructional adjustments as part of an ongoing process of assessment, and provides regular feedback to students.
- that the teacher supports students in developing the dispositions and proficiencies necessary to use mathematical reasoning, to investigate and explore patterns, to discover mathematical structures and relationships, to solve problems, and to communicate and extend conclusions.
- that the teacher integrates prior student knowledge with mathematical activities that are connected to the learning goals, and sequences and structures instruction so that students can achieve the goals.
- that the teacher draws on knowledge of students' backgrounds, needs, abilities, and interests, and on her or his own knowledge of mathematics in selecting goals and in selecting instructional approaches and instructional resources that support these goals.
- that the teacher communicates adequately about the pedagogical decisions made before, during, and after instruction; describes her or his practice accurately; analyzes it; reflects on its implications for future teaching; and seeks ways to improve practice to promote student learning.

Overall, there is *little or no* evidence of establishing a safe, fair, equitable, and challenging environment that fosters the active engagement of students with the teacher and with each other in sharing ideas and in exploring significant mathematics topics, effectively integrating prior student knowledge with mathematical activities that are connected to learning goals.

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