edTPA

Understanding Rubric Level Progressions

Elementary Mathematics
Version 01

Candidate Support Resource

SCALE
Stanford Center for Assessment, Learning, & Equity

URLP_ELM_v01

Overview

edTPA's portfolio is a collection of authentic artifacts and evidence from a candidate's actual teaching practice. *Understanding Rubric Level Progressions* (URLP) is a KEY resource that is designed to describe the meaning behind the rubrics. A close read of the following URLP sections will help program faculty and supervisors internalize the criteria and level distinctions for each rubric.

This document is intended as a resource for program faculty and supervisors who are supporting candidates with edTPA. Faculty and supervisors are strongly encouraged to share this document with candidates and use it to support their understanding of the rubrics, as well as their development as new professionals. The *Understanding Rubric Level Progressions* is intended to enhance, not replace, the support that candidates receive from programs in their preparation for edTPA.

In the next section, we provide definitions and guidelines for making scoring decisions. The remainder of the document presents the score-level distinctions and other information for each edTPA rubric, including:

1. Elaborated explanations for rubric Guiding Questions
2. Definitions of key terms used in rubrics
3. Primary sources of evidence for each rubric
4. Rubric-specific scoring decision rules
5. Examples that distinguish between levels for each rubric: Level 3, below 3 (Levels 1 and 2), and above 3 (Levels 4 and 5).

Scoring Decision Rules

When evidence falls across multiple levels of the rubric, scorers use the following criteria while making the scoring decision:

1. **Preponderance of Evidence**: When scoring each rubric, scorers must make score decisions based on the evidence provided by candidates and how it matches the rubric level criteria. A pattern of evidence supporting a particular score level has a heavier weight than isolated evidence in another score level.
2. **Multiple Criteria**: In cases where there are two criteria present across rubric levels, greater weight or consideration will be for the criterion named as "primary."
3. **Automatic 1**: Some rubrics have Automatic 1 criteria. These criteria outweigh all other criteria in the specific rubric, as they reflect essential practices related to particular guiding questions. NOTE: Not all criteria for Level 1 are Automatic 1s.

ELEMENTARY MATHEMATICS LEARNING SEGMENT FOCUS:

Candidate's instruction should support students to develop conceptual understanding, procedural fluency, and mathematical reasoning/problem-solving skills.

Planning Rubric 1: Planning for Mathematical Understandings

EM1: How do the candidate's plans build students' conceptual understanding, procedural fluency, AND mathematical reasoning or problem-solving skills?

The Guiding Question

The Guiding Question addresses how a candidate's plans build a learning segment of three to five lessons around a central focus. Candidates will explain how they plan to organize tasks, activities, and/or materials to align with the central focus and the standards/objectives. The planned learning segment must develop students' conceptual understanding, procedural fluency, AND mathematical reasoning or problem-solving skills.

Key Concepts of Rubric:

- *Aligned*—Standards, objectives, instructional strategies, and learning tasks are "aligned" when they consistently address the same/similar learning outcomes for students.
- *Significant content inaccuracies*—Content flaws in commentary explanations, lesson plans, or instructional materials that will lead to student misunderstandings and the need for reteaching.

Mathematic Terms Central to the edTPA:

- *Conceptual understanding*—Students demonstrate "conceptual understanding" in mathematics when they recognize, label, and generate examples of concepts; use and interrelate models, diagrams, manipulatives, and varied representations of concepts; identify and apply principles; know and apply facts and definitions; compare, contrast, and integrate related concepts and principles; recognize, interpret, and apply the signs, symbols, and terms used to represent concepts (NAEP, 2003; *What Does the NAEP Mathematics Assessment Measure?*).
- *Procedural Fluency*—"Procedural fluency" is a critical component of mathematical proficiency. Procedural fluency is the ability to apply procedures accurately, efficiently, and flexibly; to transfer procedures to different problems and contexts; to build or modify procedures from other procedures; and to recognize when one strategy or procedure is more appropriate to apply than another. To develop procedural fluency, students need experience in integrating concepts and procedures and building on familiar procedures as they create their own informal strategies and procedures. Students need opportunities to justify both informal strategies and commonly used procedures mathematically, to support and justify their choices of appropriate procedures, and to strengthen their understanding and skill through distributed practice[1].

[1] From "Procedural Fluency in Mathematics". Downloaded from www.nctm.org on February 9, 2016.

- *Mathematical reasoning*—"…the capacity to think logically about the relationships among concepts and situations. Such reasoning is correct and valid, stems from careful consideration of alternatives, and includes knowledge of how to justify the conclusions…One uses it to navigate through the many facts, procedures, concepts, and solution methods and to see that they all fit together in some way, that they make sense." (National Research Council, (2001). *Adding it Up: Helping Children Learn Mathematics*, p. 151, "adaptive reasoning").
- *Problem-solving skills*—Skills to engage in a task for which the solution method is not known in advance (adapted from *Principles and Standards for School Mathematics*, p. 52).

Primary Sources of Evidence:

Context for Learning Information

Planning Commentary **Prompt 1**

Strategic review of Lesson Plans & Instructional Materials

Scoring Decision Rules

► **Multiple Criteria**	■ N/A for this rubric
► **AUTOMATIC 1**	■ Pattern of significant content inaccuracies that are core to the central focus or a key learning objective for the learning segment ■ A pattern of misalignment is demonstrated in relation to standards/objectives, learning tasks and materials across two or more lessons

Unpacking Rubric Levels

Level 3

Evidence that demonstrates performance at Level 3:

- Plans for instruction are **logically sequenced** to facilitate students' learning.
- Plans are presented in a linear sequence in which **each lesson builds on the previous one**(s) OR a nonlinear sequence, e.g., when a mathematical problem is posed and students develop an understanding of concepts and procedures by mathematical reasoning from what they already know to explore the problem.
- In addition, the sequencing of the plans supports students' learning by connecting facts and procedures to concepts **OR** mathematical reasoning or problem solving during the learning segment. **These connections are explicitly written in the plans or commentary** and how the connections are made is not left to the determination of the scorer.
- Be sure to pay attention to each component of the subject-specific emphasis (facts, concepts, procedures, mathematical reasoning, or problem solving).

Below 3

Evidence that demonstrates performance below 3:

- Plans for instruction support student learning of facts and/or computations/procedures but **with little or no** planned instruction to guide understanding of the underlying concepts of facts and procedures or why the procedures work.

What distinguishes a Level 2 from a Level 3: At a Level 2,

- The candidate is paying some attention to helping students understand what they are doing with facts or procedures, but the **connections** to concepts or mathematical reasoning or problem solving **are fleeting or vague** so that students are largely left to make sense of these on their own.

What distinguishes a Level 1 from a Level 2: At a Level 1,

- The candidate is **focused on teaching step-by-step procedures or memorization** where there is little or no attention to assisting students in understanding the concepts or mathematical reasoning.

Automatic Score of 1 is given when:

- There is a pattern of **significant content inaccuracies** that will lead to student misunderstandings. Content flaws in the plans or instructional materials are significant and systematic, and interfere with student learning.
- **Standards, objectives, learning tasks, and materials are not aligned** with each other. There is a pattern of misalignment across two or more lessons. If one standard or objective does not align within the learning segment, this level of misalignment is not significant enough for a Level 1. For example, if each lesson has a different math topic, then there is a significant pattern of misalignment.

Above 3

Evidence that demonstrates performance above Level 3:

- Learning tasks are designed to support students to make clear, **consistent** connections between facts, procedures, concepts **AND** mathematical reasoning or problem-solving skills.
- Consistent connections require students to routinely apply understandings of concepts and explain their mathematical reasoning or problem-solving strategies as they use facts or procedures throughout the learning segment.

What distinguishes a Level 4 from a Level 3: At a Level 4,

- In the commentary, the candidate addresses connections between and among concepts, procedures, AND mathematical reasoning or problem solving **in every lesson**. Be sure to pay attention to each component of the subject-specific emphasis (facts, concepts, procedures, mathematical reasoning or problem solving).
- In some learning segments, the beginning lessons of a segment may focus on conceptual understanding with mathematical reasoning and there might not be procedural fluency included until lessons later in the learning segment. If the lesson progression is clearly explained, then procedural fluency may not be included in every lesson.
- The candidate uses these connections **to deepen student understanding of the central focus**.

What distinguishes a Level 5 from a Level 4: At a Level 5, the candidate meets all of Level 4 **AND**

- **Plans include activities and questions that will clearly support students in making these connections themselves.**

- This would include **plans that pose strategic problems and/or questions that lead students to make the connections** and/or plans where **students develop the habit** of looking for connections between concepts and procedures through mathematical reasoning and problem-solving strategies, justifying the steps in a solution, and/or identifying and correcting errors in their solution strategy.

Planning Rubric 2: Planning to Support Varied Student Learning Needs

EM2: How does the candidate use knowledge of his/her students to target support for students to develop conceptual understanding, procedural fluency, AND mathematical reasoning or problem-solving skills?

The Guiding Question

The Guiding Question addresses how the candidate plans to support students in relationship to students' characteristics. This includes using the candidate's understanding of students to develop, choose, or adapt instructional strategies, learning tasks and materials.

Key Concepts of Rubric:

- Planned Supports include instructional strategies, learning tasks and materials, and other resources deliberately designed to facilitate student learning of the central focus.

Primary Sources of Evidence:

Context for Learning Information (required supports, modifications, or accommodations)

Planning Commentary **Prompts 2 and 3**

Strategic review of lesson plans and instructional materials to clarify planned supports.

Scoring Decision Rules

► **Multiple Criteria**	▪ N/A for this rubric
► **AUTOMATIC 1**	▪ Planned support according to requirements in IEP or 504 plans is completely missing. The automatic 1 is only related to the support for IEP or 504 plans, not for students with other learning needs. ▪ If there are no students with IEPs or 504 plans, then this criterion is not applicable.

Unpacking Rubric Levels

Level 3

Evidence that demonstrates performance at <u>Level 3</u>:

- Candidate explains how planned supports for students address the learning needs of the whole class while assisting them in achieving the learning objectives.
- Candidate addresses at least one of the instructional requirements from IEPs and 504 plans as described in the Context for Learning Information.
  - Requirements must be explicitly addressed in the commentary and/or the Planning Task 1 artifacts. List of requirements and/or accommodations in the Context for Learning Information document is not sufficient by itself.

Below 3

Evidence that demonstrates performance <u>below 3</u>: Candidate plans insufficient instructional supports to develop students' learning relative to the learning objectives or the central focus. Evidenced by ONE or more of the following:

- Candidate does not plan instructional supports for students.
- Planned supports are not closely tied to learning objectives or the central focus.
- Evidence does not reflect ANY instructional requirements in IEP or 504 plans.

What distinguishes a Level 2 from a Level 3: At Level 2,

- Plans address at least one of the instructional requirements set forth in IEPs and 504 plans. However, it is not clear that other planned supports will be helpful in supporting students to meet the learning objectives.
- The supports would work for almost any learning objective. Therefore, instructional supports are not closely connected to the learning objectives or central focus (e.g., pair high and low students during partner work without a specific description of how that supports students with a specific need, check on students who are usually having trouble, without any specific indication of what the candidate might be checking for, such as setting up equation correctly from a word problem).
- Supports are tied to learning objectives within each lesson, but there is no central focus.

What distinguishes a Level 1 from a Level 2: At Level 1,

- Evidence of intentional instructional support for students' needs as described by the candidate is absent.

Automatic Score of 1:

- If IEP/504 requirements are described in the Context for Learning or commentary but none are included in the planned support, then the rubric is scored as an Automatic Level 1, regardless of other evidence of support for the whole class or groups or individuals in the class. If the candidate describes one or more of the IEP or 504 plan requirements for any student in the lesson plans or commentary, then the score is determined by the Planned Support criterion. **(If there are no students with IEPs or 504 plans, then this criterion is not applicable.)**

Above 3

Evidence that demonstrates performance <u>above 3</u>:

- Plans address specific student needs (beyond those required in IEP and 504 plans) by including scaffolding or structured instructional supports that are explicitly selected or developed (targeted) to help individual students and groups of students with similar needs to gain access to content and meet the learning objectives.

What distinguishes a Level 4 from a Level 3: At Level 4,

- The candidate explains how the instructional supports tied to the learning objectives are intended to meet specific needs of individuals or groups of students with similar needs, in addition to the whole class. Instructional supports should be provided for more than one student—either more than one individual or for a specific group of students with similar needs (e.g., pre-teaching a prerequisite skill before the lesson, providing a targeted, sequenced set of practice problems to develop from existing learning to new learning for a specific group of students, specifically describe how the representations will be used to develop conceptual understanding and/or mathematical reasoning based on specific student needs).

What distinguishes a Level 5 from a Level 4: At Level 5, the candidate meets Level 4 **AND**

- Identifies possible preconceptions, errors, or misconceptions associated with the central focus and describes specific strategies to identify if students have these misconceptions and how to respond to them.
    - If the plans and commentary attend to preconceptions, errors, or misconceptions without also satisfying Level 4 requirements, this is not sufficient evidence for Level 5.

Planning Rubric 3: Using Knowledge of Students to Inform Teaching and Learning

EM3: How does the candidate use knowledge of his/her students to justify instructional plans?

The Guiding Question

The Guiding Question addresses how the candidate justifies the ways in which learning tasks and materials make content meaningful to students, by drawing upon knowledge of individuals or groups, as well as research or theory.

Key Concepts of Rubric:

- *Deficit thinking* is revealed when candidates explain low academic performance based primarily on students' cultural or linguistic backgrounds, the challenges they face outside of school or from lack of family support. When this leads to a pattern of low expectations, not taking responsibility for providing appropriate support, or not acknowledging any student strengths, this is a deficit view.

For the following terms from the rubric, see the handbook glossary:

- *prior academic learning*
- *assets* (personal, cultural, community)

Primary Sources of Evidence:

Planning Commentary **Prompts 2 and 3**

Scoring Decision Rules

► **Multiple Criteria**	■ Criterion 1 (primary): Justification of plans using knowledge of students—i.e., prior academic learning AND/OR assets (personal, cultural, community) ■ Criterion 2: Research and theory connections ■ Place greater weight or consideration on criterion 1 (justification of plans using knowledge of students).
► **AUTOMATIC 1**	■ Deficit view of students and their backgrounds

Unpacking Rubric Levels

Level 3

Evidence that demonstrates performance at Level 3:

- *Primary Criterion*: The candidate explains how the learning tasks are explicitly connected to the students' prior academic knowledge OR knowledge of students' assets (personal, cultural, community). Assets include students' cultural and linguistic backgrounds, interests, community or family resources and personal experiences.
- *Secondary Criterion*: The candidate refers to research or theory in relation to the plans to support student learning. The connections between the research/theory and the tasks are superficial/not clearly made. They are not well connected to a particular element of the instructional design.

- If evidence meets the primary criterion at Level 3, the rubric is scored at Level 3 **regardless of the evidence for the secondary criterion**.
- If evidence meets the primary criterion at Level 4, and candidate has NO connection to research/theory, the rubric is scored at Level 3.

Below 3

Evidence that demonstrates performance <u>below 3</u>:

- There is a limited amount of evidence that the candidate has considered his/her particular class in planning.

OR

- The candidate justifies the plans through a deficit view of students and their backgrounds.

What distinguishes a Level 2 from a Level 3: At Level 2,

- The candidate's justification of the learning tasks makes some connection with what they know about students' prior academic learning OR assets (personal, cultural, community). These connections are not strong, but are instead vague or unelaborated, or involve a listing of what candidates know about their students in terms of prior knowledge or background without making a direct connection to how that is related to planning.

What distinguishes a Level 1 from a Level 2: At Level 1,

- There is no evidence that the candidate uses knowledge of students to plan.

Automatic Score of 1 is given when:

- Candidate's justification of learning tasks includes a pattern representing a deficit view of students and their backgrounds. (See the explanation of deficit thinking listed above under Key Concepts of Rubric.)

Above 3

Evidence that demonstrates performance <u>above 3</u>:

- The candidate's justification not only uses knowledge of students—as both academic learners AND as individuals who bring in personal, cultural or community assets—but also uses research or theory to inform planning.

What distinguishes a Level 4 from a Level 3: At Level 4,

- The evidence includes specific examples from students' prior academic learning **AND** knowledge of students' assets (personal, cultural, community), and explains how the plans reflect this knowledge. The explanation needs to include **explicit connections** between the learning tasks and the examples provided.
- The candidate explains how research or theory informed the selection or design of at least one learning task or the way in which it was implemented. The connection between the research or theory and the learning task(s) must be explicit.
- Scoring decision rules: To score at Level 4, the candidate must meet the primary criterion at Level 4 and make at least a fleeting, relevant reference to research or theory (meet the secondary criterion at least at Level 3).

What distinguishes a Level 5 from a Level 4: At Level 5, the candidate meets Level 4 **AND**

- Explains how principles of research or theory support or **set a foundation for** their planning decisions.
  - The justifications are explicit, well-articulated, and demonstrate a thorough understanding of the research/theory principles that are clearly reflected in the plans.

Planning Rubric 4: Identifying and Supporting Language Demands

EM4: How does the candidate identify and support language demands associated with a key mathematics learning task?

The Guiding Question

The Guiding Question focuses on how the candidate describes the planned instructional supports that address the identified language demands for the learning task.

Key Concepts of Rubric:

Scorers should use the definitions below and the subject-specific Academic Language handout to further clarify concepts on Rubric 4.

- **language demands**—Specific ways that academic language (vocabulary, functions, discourse, syntax) is used by students to participate in learning tasks through reading, writing, listening, and/or speaking to demonstrate their disciplinary understanding.
- **language functions**—Purpose for which language is used. The content and language focus of the learning task, often represented by the active verbs within the learning outcomes. Common language functions in mathematics include **describing** mathematical phenomena, **predicting** from models and data, **comparing** based on common attributes, **summarizing** mathematical information, **explaining** multiple ways to solve problems, **justifying** conclusions, **evaluating** data and mathematical representations, **classifying** based on attributes, and **explaining** how or why certain strategies work.
- Some specific mathematics verbs are non-examples of language functions because they focus on a mathematical action, not a language-based action. Examples of mathematical functions that ARE NOT language functions include **solving** problems, **calculating** the answers, **modeling** the problem, and **estimating** the answers.
- **vocabulary and/or symbols**—Words and phrases that are used within disciplines including: (1) words and phrases with subject-specific meanings that differ from meanings used in everyday life (e.g., table, product); (2) general academic vocabulary used across disciplines (e.g., compare, analyze, evaluate); and (3) subject- specific words defined for use in the discipline (e.g., addend, ratio). This includes symbols that are used to communicate mathematical language (e.g., =, +, ÷, ×)
- **discourse**—How members of the discipline talk, write, and participate in knowledge construction, using the structures of written and oral language. Discipline-specific discourse has distinctive features or ways of structuring oral or written language (text structures) that provide useful ways for the content to be communicated. In mathematics, language structures include graphic representations such as tables and graphs (which are shorthand language for summarizing complex sets of data), and narratives (e.g., making conjectures, interpreting word problems, explanations of problem solutions). If the function is to compare, then appropriate language forms could include narratives structured to include sentences such as "The ____ is longer/larger/heavier than the ____."

- **syntax**—The rules for organizing words or symbols together into phrases, clauses, sentences or visual representations (graphs, tables) e.g., One of the main functions of syntax is to organize language in order to convey meaning.
- **language supports**—The scaffolds, representations, and instructional strategies teachers intentionally provide to help learners understand and use the concepts and language they need to learn within disciplines. The language supports planned within the lessons in edTPA should directly support learners to understand and use identified language demands (vocabulary and/or symbols, language function, syntax, or discourse) to deepen content understandings.

Primary Sources of Evidence:

Planning Commentary **Prompt 4 a–d**

Strategic review of Lesson Plans

Scoring Decision Rules

► **Multiple Criteria**	■ N/A
► **AUTOMATIC 1**	■ None

Unpacking Rubric Levels

Level 3

Evidence that demonstrates performance at <u>Level 3</u>:

- General supports are planned and described, though not in specific detail, for students' application of any two or more of the language demands (function, vocabulary and/or symbols and syntax, discourse, or mathematical precision).
  - Language supports must go beyond providing opportunities for students to practice using the language demands either individually or with other students within the learning segment. Examples of general language supports include describing and defining the function, modeling vocabulary, syntax or discourse, providing an example with little explanation, questions and answers about a language demand, whole group discussion of a language demand, providing pictures to illustrate vocabulary.
- The candidate may inaccurately categorize a language demand (e.g., identifies syntax as discourse), but does describe general supports for two of the language demands required of students within the learning task. For example:
  - "For discourse, I will model how to identify and substitute terms into the formula for finding the area of a triangle. To support vocabulary, we will review the terms (side, hypotenuse) and solve several sample problems as a class." This example would be scored at a level 3 because there are supports for two language demands, vocabulary and syntax, even though the candidate categorizes using formulas (a form of syntax) as discourse.
- If the candidate chooses a mathematical function that is NOT a language function, supports for that function cannot be used to justify a score. The rubric can be scored at Level 3 if the supports are for two other demands (e.g.; vocabulary and discourse), but cannot be scored above a 3.

Below 3

Evidence that demonstrates performance <u>below 3</u>:

- The candidate has a superficial view of academic language and provides supports that are misaligned with the demands or provides support for only one language demand (vocabulary and/or symbols, function, syntax, or discourse).

What distinguishes a Level 2 from a Level 3: At Level 2,

- The primary focus of support is on only one of the language demands (vocabulary and/or symbols, function, syntax, or discourse) with little to no attention to any of the other language demands.
- One of the two demands for which supports are described is a language function, but this function does not qualify as a language function (solving a problem, simplifying an expression, modeling how to solve the problem)
- Support may be general, (e.g., discussing, defining, or describing a language demand), or it may be targeted, (e.g., modeling a language demand while using an example with labels). Regardless, the support provided is limited to one language demand.

What distinguishes a Level 1 from a Level 2: At Level 1,

- There is a pattern of misalignment between the language demand(s) and the language supports identified. For example, the language function is listed as compare/contrast, but the language task is that the students will be adding two three-digit numbers and explain what strategy they used. The syntax is supported by sentence frames that say, First I …, Next I …
- The only demand is the language function, but the language function that is identified does not qualify as a language function (solving a problem, simplifying an expression, modeling how to solve the problem).

OR

- Language supports are completely missing.

Above 3

Evidence that demonstrates performance <u>above 3</u>:

- The supports specifically address the language function, vocabulary and/or symbols, and at least one other language demand (syntax or discourse) in relation to the use of the language function in the context of the chosen task.

What distinguishes a Level 4 from a Level 3: At Level 4,

- The candidate identifies specific planned language supports and describes how supports address each of the following: vocabulary/symbols, the language function, and at least one other language demand (syntax and/or discourse).
- Supports (e.g., provide structures or scaffolding) to address specific language demands, such as sentence starters (syntax or function); modeling how to construct an argument or explanation (function, discourse); graphic organizers tailored to organizing categories or compare and contrast (discourse or function); identifying critical elements of a language function using an example; or more in-depth exploration of vocabulary development (vocabulary mapping that includes antonym, synonym, student definition, and illustration).

What distinguishes a Level 5 from a Level 4: At Level 5, the candidate meets all of Level 4 **AND**

- The candidate includes and explains how one or more of the language supports are either designed or differentiated to meet the needs of students with differing language needs.

Planning Rubric 5: Planning Assessments to Monitor and Support Student Learning

EM5: How are the informal and formal assessments selected or designed to monitor students' conceptual understanding, procedural fluency, AND mathematical reasoning or problem-solving skills?

The Guiding Question

The Guiding Question addresses the alignment of the assessments to the standards and objectives and the extent to which assessments provide multiple forms of evidence to monitor student progress throughout the learning segment. It also addresses required adaptations from IEPs or 504 plans. The array of assessments should provide evidence of students' conceptual understanding, computational/procedural fluency, and mathematical reasoning/problem-solving skills.

Key Concepts of Rubric:

- **assessment (formal and informal):** "[R]efer[s] to all those activities undertaken by teachers and by their students . . . that provide information to be used as feedback to modify the teaching and learning activities."[2] Assessments provide evidence of students' prior knowledge, thinking, or learning in order to evaluate what students understand and how they are thinking. Informal assessments may include, for example, student questions and responses during instruction and teacher observations of students as they work or perform.
- Formal assessments may include, for example, quizzes, homework assignments, journals, projects, and performance tasks.

Primary Sources of Evidence:

Context for Learning Information (required supports, modifications, or accommodations for assessments)

Planning Commentary **Prompt 5**

Assessment Materials

Strategic review of Lesson Plans

Scoring Decision Rules

► **Multiple Criteria**	■ N/A for this rubric
► **AUTOMATIC 1**	■ Assessment requirements from the IEP or 504 plan have to be explicitly addressed in the commentary and/or the Planning Task 1 artifacts. List of assessment requirements and/or accommodations in the Context for Learning Information document is not sufficient by itself.

[2] Black, P., & Wiliam, D. (1998). Inside the black box: Raising standards through classroom assessment. *Phi Delta Kappan, 80*(2), 139–148.

Unpacking Rubric Levels

Level 3

Evidence that demonstrates performance at Level 3:

- The planned assessments provide evidence of students' conceptual understanding, procedural fluency, AND mathematical reasoning/problem-solving skills at various points within the learning segment. The assessments must provide evidence of all three (conceptual understanding, procedural fluency, and mathematical reasoning/problem-solving skills).
- Requirements from the IEP or 504 plan must be explicitly addressed in the commentary and/or the Planning Task 1 artifacts. List of assessment requirements and/or accommodations in the Context for Learning Information document is not sufficient by itself.

Below 3

Evidence that demonstrates performance below 3:

- The planned assessments will yield insufficient evidence to monitor students' conceptual understanding, procedural fluency, or mathematical reasoning/problem-solving skills within the learning segment.

What distinguishes a Level 2 from a Level 3: At Level 2,

- Assessments will produce evidence of student learning, but evidence is limited. Examples of limited assessments include a single assessment or assessments for only procedures or conceptual understanding and not the other areas. (e.g., worksheets only asking for answers, worksheet of word problems without asking for explanations)
- Although assessments may provide some evidence of student learning, they do not monitor all areas of learning across the learning segment.

What distinguishes a Level 1 from a Level 2: At Level 1,

- The assessments only focus on memorization of facts or following procedures without providing evidence of conceptual understanding or mathematical reasoning/problem-solving skills. (e.g., timed tests)

Automatic Score of 1:

- If there is NO attention to ANY assessment-related IEP/504 plan requirements (e.g., more time; a scribe for written assignments) in either the commentary or the Planning Task 1 artifacts, the score of 1 is applied; otherwise the evidence for the other criteria will determine the score. **(If there are no students with IEPs or 504 plans, then this criterion is not applicable.)**

Above 3

Evidence that demonstrates performance above 3:

- The array of assessments provides consistent evidence of conceptual understanding, procedural fluency, AND mathematical reasoning or problem-solving skills.
- Assessment evidence will allow the candidate to determine students' progress toward developing conceptual understanding, procedural fluency, AND mathematical reasoning or problem-solving skills.

What distinguishes a Level 4 from a Level 3: At Level 4,

- There are multiple forms of evidence, not just the same kind of evidence collected at different points in time or in different settings, to monitor student development of conceptual understanding, procedural fluency, and mathematical reasoning/problem-solving skills for the central focus. "Multiple forms of evidence" means that different types of evidence are used—e.g., explanations of thinking, drawings, explanations of reasoning for problem solutions, application to word problems—and not that there is only one type of evidence on homework, exit slips, and the final test.
- The array of assessments provides evidence to track student progress toward developing the areas of conceptual understanding, procedural fluency, and mathematical reasoning or problem-solving skills defined by the standards and learning objectives.
- This evidence is collected for all three areas in every lesson OR the assessments correspond to a plan for the learning segment that builds understandings in one or more areas and uses that understanding to address other areas.

What distinguishes a Level 5 from a Level 4: At Level 5, the candidate meets Level 4 **AND**

- Describes how assessments are targeted and explicit in design to allow individuals or groups with specific needs to demonstrate their learning without oversimplifying the content.
  - Strategic design of assessments goes beyond, for example, allowing extra time to complete an assignment or adding a challenge question.
  - Individuals and/or groups with specific needs must be above and beyond those with IEPs or 504 plans.

Instruction Rubric 6: Learning Environment

EM6: How does the candidate demonstrate a respectful learning environment that supports students' engagement in learning?

The Guiding Question

The Guiding Question addresses the type of learning environment that the candidate establishes and the degree to which it fosters respectful interactions between the candidate and students, and among students.

Key Concepts of Rubric:

- *Respect*—A positive feeling of esteem or deference for a person and specific actions and conduct representative of that esteem. Respect can be a specific feeling of regard for the actual qualities of the one respected. It can also be conduct in accord with a specific ethic of respect. Rude conduct is usually considered to indicate a lack of respect, ***disrespect***, whereas actions that honor somebody or something indicate respect. Note that respectful actions and conduct are culturally defined and may be context dependent. **Scorers are cautioned to avoid bias related to their own culturally constructed meanings of respect.**
- *Rapport*—A close and harmonious relationship in which the people or groups understand each other's feelings or ideas and communicate well.

For the following term from the rubric, see the handbook glossary:

- *Learning environment*

Primary Sources of Evidence:

Video Clip(s)

Instruction Commentary **Prompt 2**

Note that for the Instruction Task, the commentary is intended to provide context for interpreting what is shown in the video. Candidates sometimes describe events that do not appear in the video or conflict with scenes from the video—**such statements should not override evidence depicted in the video**.

Scoring Decision Rules

► **Multiple Criteria**	■ N/A
► **AUTOMATIC 1**	■ None

Unpacking Rubric Levels

Level 3

Evidence that demonstrates performance at Level 3: In the clip(s):

- The candidate's interactions with students are respectful (e.g., calls students by first name, use modulated voice, attentive listening by repeating or restating students' responses), demonstrate rapport (evidence of relationship between candidate and students and/or ease of interaction that goes back and forth based on relevance or engaged conversation), and students communicate easily with the candidate. AND
- There is evidence that the candidate facilitates a positive learning environment wherein students are willing to answer questions and work together without the candidate or other students criticizing their responses. AND
- There is evidence of mutual respect among students. Examples include attentive listening while other students speak, respectful attention to another student's idea (even if disagreeing), working together with a partner or group to accomplish tasks.

Below 3

Evidence that demonstrates performance below 3: The clip(s):

- Do not exhibit evidence of positive relationships and interactions between candidate and students.
- Reveal a focus on classroom management and maintaining student behavior and routines rather than engaging students in learning.

What distinguishes a Level 2 from a Level 3: At Level 2,

- Although clip(s) reveal the candidate's respectful interactions with students, there is an emphasis on candidate's rigid control of student behaviors, discussions, and other activities in ways that limit and do not support student learning.

What distinguishes a Level 1 from a Level 2: At Level 1, there are **two different ways** that evidence is scored:

1. The clip(s) reveal evidence of candidate-student or student-student interactions that discourage student contributions, disparage the student(s), or take away from learning.
2. The classroom management is so weak that the candidate is not able to, or does not successfully redirect students, or the students themselves find it difficult to engage in learning tasks because of disruptive behavior.

Note: Classroom management styles vary. Video clips that show classroom environments where students are productively engaged in the learning task should not be labeled as disruptive. Examples of this may include students engaging in discussion with peers, speaking without raising their hands, or being out of their seats.

Above 3

Evidence that demonstrates performance above 3: The clip(s)

- Reveal a positive learning environment that includes tasks/discussions that challenge student thinking and encourage respectful student-student interaction.

What distinguishes a Level 4 from a Level 3: At Level 4,

- The learning environment supports learning experiences that appropriately challenge students by promoting higher-order thinking or application to develop new learning. There must be evidence that the environment is challenging for students. Examples include: Students cannot answer immediately, but need to think to respond; the candidate asks higher-order thinking questions; students are trying to apply their initial learning to another context.
- The learning environment encourages and supports mutual respect among students, e.g., candidate reminds students to discuss ideas respectfully with each other.

What distinguishes a Level 5 from a Level 4: At Level 5,

- The learning environment encourages students to express, debate, and evaluate differing perspectives about content (solutions to problems, ways to solve a problem, most efficient way to solve the problem) with each other. Perspectives could be from curricular sources, students' ideas, and/or lived experiences.

Instruction Rubric 7: Engaging Students in Learning

EM7: How does the candidate actively engage students in developing understanding of mathematical concepts?

The Guiding Question

The Guiding Question addresses how the candidate provides video evidence of engaging students in meaningful tasks and discussions to develop conceptual understanding.

Key Concepts of Rubric:

For the following terms from the rubric, see the handbook glossary:

- *Engaging students in learning*
- *Assets* (personal, cultural, community)

Primary Sources of Evidence:

Video Clip(s)

Instruction Commentary **Prompt 3**

Note that for the Instruction Task, the commentary is intended to provide context for interpreting what is shown in the video. Candidates sometimes describe events that do not appear in the video or conflict with scenes from the video—**such statements should not override evidence depicted in the video**.

Scoring Decision Rules

► **Multiple Criteria**	■ Criterion 1 (primary): Engagement in learning tasks ■ Criterion 2: Connections between students' academic learning AND/OR assets (personal, cultural, community) and new learning ■ Place greater weight or consideration on the criterion 1 (engagement in learning tasks).
► **AUTOMATIC 1**	■ None

Unpacking Rubric Levels

Level 3

Evidence that demonstrates performance at <u>Level 3</u>:

- *Primary Criterion*: The clip(s) show that the students are engaged in learning tasks that address understandings of mathematical concepts. Although these content understandings are evident in conversations, they are addressed at a cursory level. For example, the candidate has students sorting a group of polygon shapes. When the students are finished grouping the shapes, the candidate has the students share why they group the polygons the way they did. As most groups sorted by the number of sides, the candidate tells the students that polygons with a certain number of sides has a certain name (triangle, quadrilateral, pentagon, etc.) and records the names of the shapes on a chart. At this point, the candidate immediately moves on to another activity leaving the understanding of classes of polygons at a cursory level.

- *Secondary Criterion*: The clips show the candidate **making connections** to students' prior academic learning to help them develop the new content or skills.

Below 3

Evidence that demonstrates performance <u>below 3</u>:

- Students are participating in tasks that focus primarily on mathematical skills or procedures with little attention to developing understandings of mathematical concepts.

What distinguishes a Level 2 from a Level 3: At Level 2,

- Students are participating in rote tasks that primarily focus on learning skills or following step-by-step procedures and provide little opportunity to develop conceptual understanding. For example, the candidate is modeling how to solve a 3-digit by 2–3 digit multiplication problem step-by-step using the standard algorithm while students are expected to copy the steps on a piece of paper.
- The structure of the learning task or the way in which it is implemented constrains student development of conceptual understanding.
- In addition, the candidate may refer to students' learning from prior units, but the references are indirect or unclear and do not facilitate new learning.

What distinguishes a Level 1 from a Level 2: At Level 1,

- The learning tasks seen in the video clip(s) have little relation to the central focus identified.
- In addition, the candidate is not using either students' prior academic learning or assets (personal, cultural, community) to build new learning.

Above 3

Evidence that demonstrates performance <u>above 3</u>:

- The learning tasks as seen in the clip(s) are structured to engage students to develop understandings of mathematical concepts.
- Connections between students' prior academic learning and assets (personal, cultural, community) are made to support new learning.

What distinguishes a Level 4 from a Level 3: At Level 4,

- The learning tasks in the clip(s) include structures or scaffolding that promote the development of understandings of mathematical concepts. Students must interact with the content in ways that are likely to either extend initial understandings or surface misunderstandings that the candidate can then address. For example, the candidate is solving a 3-digit by 2-digit multiplication problem using the area model and the standard algorithm and asks students to identify the relationship between the two methods.
- In addition, the candidate draws upon not only prior academic learning, but also students' assets (personal, cultural, community) to develop new learning.

What distinguishes a Level 5 from a Level 4: At Level 5,

- The learning tasks as seen in the clip(s) are structured or scaffolded so that students will deepen and extend their understandings of mathematical concepts in ways that are appropriately challenging and directly related to new learning.
- In addition, the candidate encourages students to connect and use their prior knowledge and assets (personal, cultural, community) to support new learning.

Instruction Rubric 8: Deepening Student Learning

EM8: How does the candidate elicit responses to promote thinking and to develop understanding of mathematical concepts?

The Guiding Question

The Guiding Question addresses how, in the video clip(s), the candidate brings forth and builds on student responses to guide learning; this can occur during whole class discussions, small group discussions, or consultations with individual students.

Key Concepts of Rubric:

- *Builds on student responses*—Following up with student responses to ask additional questions to clarify or extend student thinking explicitly related to the essential strategy or related skill with a goal of extending student thinking. A candidate could use of how or why questions to probe a student's response or could provide further information to deepen students' understanding.
- *Significant content inaccuracies*—Content flaws in the examples during modeling or in the explanations and/or procedures used during the lesson will lead to student misunderstandings and the need for re-teaching.

Primary Sources of Evidence:

Video Clip(s)

Instruction Commentary **Prompt 4a**

Note that for the Instruction Task, the commentary is intended to provide context for interpreting what is shown in the video. Candidates sometimes describe events that do not appear in the video or conflict with scenes from the video—**such statements should not override evidence depicted in the video**.

Scoring Decision Rules

► **Multiple Criteria**	■ N/A for this rubric
► **AUTOMATIC 1**	■ Pattern of significant content inaccuracies that are core to the central focus or a key learning objective for the learning segment

Unpacking Rubric Levels

Level 3

Evidence that demonstrates performance at <u>Level 3</u>:

- The candidate prompts students to offer responses related to mathematical reasoning/problem solving to develop understanding of a mathematical concept, e.g., by using "how" and "why" questions. Some instruction may be characterized by initial questions focusing on facts to lay a basis for later higher-order questions in the clip(s).

Below 3

Evidence that demonstrates performance <u>below 3</u>:

- In the clip(s), classroom interactions provide students with limited or no opportunities to think and learn.

What distinguishes a Level 2 from a Level 3: At Level 2,

- The candidate asks questions that elicit right/wrong or yes/no answers and do little to encourage students to think about the content being taught.

What distinguishes a Level 1 from a Level 2: At Level 1,

- There are few opportunities shown in the clip(s) that students were able to express ideas.
- The majority of the lesson focuses on the teacher talking to the students whether through modeling or explanations. There are minimal opportunities to either answer or ask questions.

Automatic Score of 1 is given when:

- There is a pattern of **significant content inaccuracies** that will lead to student misunderstandings.
- The candidate makes a significant error in content (e.g., introducing an inaccurate definition of a central concept before students work independently) that is core to the central focus or a key standard for the learning segment.

Above 3

Evidence that demonstrates performance <u>above 3</u>:

- In the clip(s), the candidate is eliciting and building on student ideas and thinking in relation to mathematical reasoning or problem solving to develop students' understanding of a mathematical concept.

What distinguishes a Level 4 from a Level 3: At Level 4,

- The candidate elicits and follows up on students' responses in ways that are related to mathematical reasoning/problem solving.
- The candidate uses this strategy to explicitly represent, expand, or make a mathematical concept clear.
- Examples of "building on student responses" include: referring to a previous student response in developing a point or an argument; calling on the student to elaborate on what s/he said; posing questions to guide a student discussion; soliciting student examples and asking another student to identify what they have in common; asking a student to summarize a lengthy discussion or rambling explanation; and asking another student to respond to a student comment or answer a question posed by a student to move instruction forward.

What distinguishes a Level 5 from a Level 4: At Level 5, the candidate meets all of Level 4 **AND**

- There is also evidence in the clip(s) that the candidate structures and supports student-student conversations and interactions to develop understandings of a mathematical concept.

Instruction Rubric 9: Subject-Specific Pedagogy: Using Representations

EM9: How does the candidate use representations to develop students' understanding of mathematical concepts?

The Guiding Question

The Guiding Question addresses how the candidate uses representations (e.g., manipulatives, models, tools, charts, and/or graphics) in the clip(s) to build students' understanding of mathematical content.

Key Concepts of Rubric:

- *Representations*—The term representation refers both to process and to product—in other words, to the act of capturing a mathematical concept or relationship in some form and to the form itself. . . . Moreover, the term applies to processes and products that are observable externally as well as to those that occur "internally," in the minds of people doing mathematics. All these meanings of representation are important to consider in school mathematics.[3]

Primary Sources of Evidence:

Video Clip(s)

Instruction Commentary **Prompt 4b**

Note that for the Instruction Task, the commentary is intended to provide context for interpreting what is shown in the video. Candidates sometimes describe events that do not appear in the video or conflict with scenes from the video—**such statements should not override evidence depicted in the video**.

Scoring Decision Rules

► **Multiple Criteria**	■ N/A for this rubric
► **AUTOMATIC 1**	■ Representations that are not appropriate or used inappropriately for the content being taught

Unpacking Rubric Levels

Level 3

Evidence that demonstrates performance at <u>Level 3</u>:

- In the clip(s), the candidate guides conversation and/or structures explorations using representations that help students develop understanding of mathematical concepts. For examples, the candidate models how students can use base ten blocks to build numbers between 20 and 50 using tens and ones.

[3] National Council of Teachers of Mathematics [2000]. *Principles and Standards for School Mathematics,* p. 67

Below 3

Evidence that demonstrates performance <u>below 3</u>:

- In the clip(s), the candidate is not using representations effectively to guide student learning.

What distinguishes a Level 2 from a Level 3: At Level 2,

- The candidate attempts to use representations to facilitate understanding of mathematical concepts, but the connections between them are not strong enough or clear enough to be effective. For example, the students have base 10 blocks available on the tables to use as they complete a worksheet, but the candidate does not model or describe how students can use the base ten blocks to build the 2-digit numbers on the worksheet.

What distinguishes a Level 1 from a Level 2: At Level 1,

- The candidate stays focused on facts or procedures and fails to make connections to concepts.
- There are no representations used in the video.

Automatic Score of 1 is given when:

- The representations are significantly inappropriate for the intended learning.
- The use of the representations will lead to significant student misunderstandings.

Above 3

Evidence that demonstrates performance <u>above 3</u>:

- In the clip(s), the candidate provides opportunities for the students to use representations to develop students' mathematical learning. The students are using representations in specific ways that relate to the mathematical concepts being developed.

What distinguishes a Level 4 from a Level 3: At Level 4,

- In the clip(s), the candidate provides opportunities for students to use representations to think more deeply about mathematical concepts. For example, the candidate may provide a two-digit number (29) and ask the students to use the base 10 blocks to represent that number (two tens, nine ones; one ten, 19 ones; twenty-nine ones).

What distinguishes a Level 5 from a Level 4: At Level 5, in the clip(s), the candidate meets Level 4 **AND**

- Structures and supports student-student conversations to help them develop or apply their use of representations to deepen and extend their understandings of mathematical concepts. For example, the candidate passes out cards with two-digit numbers to each student and asks each student to build models of their number and explain to a partner how the model is the same as the number on the card.

Instruction Rubric 10: Analyzing Teaching Effectiveness

EM10: How does the candidate use evidence to evaluate and change teaching practice to meet students' varied learning needs?

The Guiding Question

The Guiding Question addresses how the candidate examines the teaching and learning in the video clip(s) and proposes what s/he could have done differently to better support the needs of diverse students. The candidate justifies the changes based on student needs and references to research and/or theory.

Key Concepts of Rubric:

- N/A

Primary Sources of Evidence:

Video Clip(s) (for evidence of student learning)

Instruction Commentary **Prompt 5**

Scoring Decision Rules

► **Multiple Criteria**	■ Criterion 1 (primary): Proposed changes ■ Criterion 2: Connections to research/theory ■ Place greater weight or consideration on criterion 1 (proposed changes).
► **AUTOMATIC 1**	■ None

Unpacking Rubric Levels

Level 3

Evidence that demonstrates performance at <u>Level 3</u>:

- *Primary Criterion*: The proposed changes address the central focus and the candidate explicitly connects those changes to the learning needs of the class as a whole.
  - Proposed changes noted by the candidate should be related to the lessons that are seen or referenced in the clip(s), but do not need to be exclusively from what is seen in the clip(s) alone. This means that since only portions of the lessons will be captured by the clip(s), candidates can suggest changes to any part of the lesson(s) referenced in the clip(s), even if those portions of the lesson(s) are not depicted in the clip(s). For example, in a lesson when students are using arrays to show multiplication facts, the candidate states that next time she would make sure that students were using grid paper to draw the arrays as they struggled being able to draw boxes with evenly spaced grids and that she wanted to clarify and make sure that students understood how 4 × 5 and 5 × 4 are the same and how they are different.

- *Secondary Criterion*: The candidate refers to research or theory in relation to the plans to support student learning. The connections between the research/theory and the tasks are vague/not clearly made.

- If evidence meets the primary criterion at Level 3, the rubric is scored at Level 3 **regardless of the evidence for the secondary criterion**.
- If evidence meets the primary criterion at Level 4, and candidate has NO connection to research/theory, the rubric is scored at Level 3

Below 3

Evidence that demonstrates performance <u>below 3</u>:

- The changes proposed by the candidate are not directly related to student learning.
- The changes proposed by the candidate are not related to the student learning from the lesson(s) shown in the video clip.

What distinguishes a Level 2 from a Level 3: At Level 2,

- The changes address improvements in teaching practice that mainly focus on how the candidate structures or organizes learning tasks, with a superficial connection to student learning. There is little detail on the changes in relation to either the central focus or the specific learning that is the focus of the video clip(s). Examples include asking additional higher-order questions without providing examples of the questions, improving directions for a task, repeating instruction without making significant changes based on the evidence of student learning from the video clips, or including more group work or pair work without indicating how the group or pair work will address specific learning needs that arose during the lesson.
- If a candidate's proposed changes have nothing to do with the central focus, this rubric cannot be scored beyond a Level 2.

What distinguishes a Level 1 from a Level 2: At Level 1,

- The changes are not supported by evidence of student learning from lessons seen or referenced in the clip(s). For example, as seen in the clip the students are building arrays for multiplication facts, but the next steps relate to the students making equal groups on paper plates to more easily differentiate each group.

Above 3

Evidence that demonstrates performance <u>above 3</u>:

- The proposed changes relate to the central focus and explicitly address individual and collective needs that were within the lessons seen in the video clip(s).
- The changes in teaching practice are supported by research and/or theory.

What distinguishes a Level 4 from a Level 3: At Level 4,

- The changes clearly address the learning needs of individuals in addition to the learning needs of the whole class in the video clip(s) by providing additional support and/or further challenge in relation to the central focus. Candidate should explain how proposed changes relate to each individual's needs. For example, in a lesson when students are using arrays to show multiplication facts, the candidate states that some of the students would draw the arrays not attending to the order of the factors in the multiplication problems and that she needed to work with this small group of students again with equal groups so that they could see the difference between 6 groups of 4 and 4 groups of 6. The candidate also identifies a small group of students showed mastery of their multiplication facts and that she would begin to work with that group on decomposing facts ($4 \times 5 = 2 \times 5 + 2 \times 5$)
- The candidate explains how research or theory is related to the changes proposed. Candidates may cite research or theory in their commentary, or refer to the ideas and principles from the research; either connection is acceptable, as long as they clearly connect the research/theory to the proposed changes.
- Scoring decision rules: To score at Level 4, the candidate must meet the primary criterion at Level 4 and make at least a fleeting, relevant reference to research or theory (meet the secondary criterion at least at Level 3).

What distinguishes a Level 5 from a Level 4: At Level 5, the candidate meets Level 4 **AND**

- Explains how principles of research or theory **support or frame the proposed changes**. The justifications are explicit, well-articulated, and demonstrate a thorough understanding of the research/theory principles that are clearly reflected in the explanation of the changes.

Assessment Rubric 11: Analysis of Student Learning

EM11: How does the candidate analyze evidence of student learning of conceptual understanding, procedural fluency, AND mathematical reasoning or problem-solving skills?

The Guiding Question

The Guiding Question addresses the candidate's analysis of student work to identify patterns of learning across the class.

Key Concepts of Rubric:

- *Aligned*—The assessment, evaluation criteria, learning objectives and analysis are aligned with each other.
- *Evaluation criteria*—Evaluation criteria should indicate differences in level of performance, e.g., a rubric, a checklist of desired attributes, points assigned to different parts of the assessment. Summative grades are not evaluation criteria. Evaluation criteria must be relevant to the learning objectives, though they may also include attention to other desired features of the assessment response, e.g., neatness, spelling.

For the following term from the rubric, see the handbook glossary:

- *Patterns of learning*

Primary Sources of Evidence:

Evaluation criteria

Student work samples

Assessment Commentary **Prompt 1**

Scoring Decision Rules

► **Multiple Criteria**	■ N/A for this rubric
► **AUTOMATIC 1**	■ Significant misalignment between evaluation criteria, learning objectives, and/or analysis

Unpacking Rubric Levels

Level 3

Evidence that demonstrates performance at <u>Level 3</u>:

- The analysis is an accurate listing of what students did correctly AND incorrectly.
- The analysis is aligned with the evaluation criteria and/or assessed learning objectives.
- Some general differences in learning across the class are identified.

- For example, "Looking at the work samples, you can see that most of the students were able to add three digits efficiently by finding two numbers that added to ten and then adding the third number. Some of the students only added the numbers in the sequence they were listed. A few of the students were not able to show how they added the numbers and/or reached an incorrect answer."

Below 3

Evidence that demonstrates performance <u>below 3</u>:

- The analysis is superficial (e.g., primarily irrelevant global statements) or focuses only on partial data (on right or wrong answers or only on procedures or facts).
- The analysis is contradicted by the work sample evidence.
- The analysis is based on an inconsistent alignment with evaluation criteria and/or standards/objectives.

What distinguishes a Level 2 from a Level 3: There are **two different ways** that evidence is scored at a Level 2:

1. Although aligned with the summary, the analysis presents an incomplete picture of student learning by only addressing either successes OR errors. For example, "The students knew how to add three-digit numbers. You can see that all the students answered almost all the problems correctly."
2. The analysis does not address conceptual understanding, reasoning, or problem solving but focuses only on procedures or facts.

What distinguishes a Level 1 from a Level 2: There are **two different ways** that evidence is scored at Level 1:

1. The analysis is superficial because it ignores important evidence from the work samples, focusing on trivial aspects.
2. The conclusions in the analysis are not supported by the work samples OR the summary of learning.

Automatic Score of 1 is given when:

- There is a significant lack of alignment between evaluation criteria, learning objectives, and/or analysis.
- A lack of alignment can be caused by a lack of relevant evaluation criteria to assess student performance on the assessed learning objectives.

Above 3

Evidence that demonstrates performance <u>above 3</u>: The analysis:

- Identifies patterns of learning (quantitative and qualitative) that summarize what students know, are able to do, and still need to learn.
- Describes patterns for the whole class, groups, or individuals.
- Is supported with evidence from the work samples and is consistent with the summary.

What distinguishes a Level 4 from a Level 3: At Level 4,

- The analysis describes consistencies in performance (patterns) across the whole class in terms of what students know and are able to do and where they need to improve.

- Specific examples from work samples are used to demonstrate the whole class patterns. For example, "Most students were successful in adding three single digit numbers (Problems 1–10), but far fewer were successful when the numbers were presented as the word problems (problems 11–13). Student A was able to solve both types of problems that required adding three one-digit numbers, although making an arithmetic error on Problem 8 with otherwise correct procedures. However, most students were like Student B, who could solve the problems when the one-digit numbers were listed in a row (Problems 1–10), but could not set up the equation correctly to add three one-digit numbers found in the word problems (11–13)."
- The analysis goes beyond a listing of students' successes and errors, to an explanation of student understanding in relation to their performance on the identified assessment. An exhaustive list of what students did right and wrong, or the % of students with correct or incorrect responses, should be scored at Level 3, as that does not constitute a pattern of student learning. A pattern of student learning goes beyond these quantitative differences to identify specific content understandings or misunderstandings, or partial understandings that are contributing to the quantitative differences. For example: "Looking at the work samples for each of the focus students, you can see that most of the students were able to add three digits efficiently by finding two numbers that added to ten and then adding the third number. When you look at Student A's paper, you can see that he circled the two addends that added to ten regardless of where they were located in the problem. This shows that he understands the associative property of addition can be used to add numbers efficiently. As seen in Student B's paper, some of the students only added the numbers in the sequence they were listed. You notice that Student B circled and added the first two numbers in each problem, showing that she was not able to apply the associative property of addition to add more efficiently. Many of the students could not add the three one-digit numbers when they were presented in a word problem format. As can be seen in Student C's work sample, he usually only adds two of the numbers in the problem, leaving out the third number. The student selects the two largest of the three numbers, but doesn't add in the third number. I will need to observe students as they continue to work on adding three one-digit numbers to see what is causing the issue when the numbers are presented in word problem format."

What distinguishes a Level 5 from a Level 4: At Level 5,

- The candidate uses specific evidence from work samples to demonstrate qualitative patterns of understanding. The analysis uses these qualitative patterns to interpret the range of similar correct or incorrect responses from individuals or groups (e.g., quantitative patterns); and to determine elements of what students learned and what would be most productive to work on. The qualitative patterns may include struggles, partial understandings, and/or attempts at solutions.

- For example: "Looking at the work samples for each of the focus students, you can see that most of the students were able to add three digits efficiently by finding two numbers that added to ten and then adding the third number. When you look at Student A's paper at all the column addition problems, you can see that he circled the two addends that added to ten regardless of where they were located in the problem. This shows that he understands the associative property of addition can be used to add numbers efficiently. The students that circled the two numbers with sums of ten saw ten a friendly number and were able to quickly add the remaining number to get the sum. As seen in Student B's paper, some of the students only added the numbers in the sequence they were listed. You notice that Student B circled and added the first two numbers in each problem as seen in problems 2, 3, 5, 6, and 8 showing that she was not able to apply the associative property of addition to add more efficiently. In the other problems (1, 4, 7) the students circled the first two numbers, which did add up to ten. The students who added the first two numbers and did not see the efficiency of making a ten could have two different struggles in place. First, they may still be struggling with basic facts, especially those adding to ten. Second, they may need to work with adding the same three one-digit numbers in different orders to realize that the associative property allows them to add in any order. Many of the students could not add the three one-digit numbers when they were presented in a word problem format. As can be seen in Student C's work sample, he usually only adds two of the numbers in the problem, leaving out the third number. The student selects the two largest of the three numbers, but doesn't add in the third number. As most of the class was struggling with adding the three one-digit numbers found in a word problem, I need to interview a few students to see if the struggle is not being able to see the key information in the problem or if they are following a pattern of adding just two numbers in any problem that they see."

Assessment Rubric 12: Providing Feedback to Guide Learning

EM12: What type of feedback does the candidate provide to focus students?

The Guiding Question

The Guiding Question addresses the evidence of feedback provided to the focus students. Feedback may be written on the three student work samples or provided in a video/audio format. The feedback should identify what students are doing well and what needs to improve in relation to the learning objectives.

Key Concepts of Rubric:

- *Significant content inaccuracies*—Content flaws in the feedback are significant and systematic, and interfere with student learning
- *Developmentally inappropriate feedback*—Feedback addressing concepts, skills, or procedures well above or below the content assessed (without clearly identified need) OR feedback that is not appropriate for the developmental level of the student (e.g., lengthy written explanations for young children or English learners).

Primary Sources of Evidence:

Student Work Samples

Evidence of written, audio, and/or video feedback

Assessment Commentary **Prompts 1a and 2 a–b**

Scoring Decision Rules

► **Multiple Criteria**	■ N/A
► **AUTOMATIC 1**	■ One or more content errors in the feedback that will mislead student(s) in significant ways ■ No evidence of feedback for one or more focus students
► **Preponderance of Evidence**	■ You must apply the preponderance of evidence rule when the focus students receive varying types of feedback. For example, when the candidate provides feedback on both strengths and needs for 2 out of the 3 focus students, this example would be scored at a level 4 according to the preponderance of evidence rule.

Unpacking Rubric Levels

Level 3

Evidence that demonstrates performance at Level 3:

- The feedback identifies specific strengths OR needs for improvement. At Level 3, the candidate MUST provide the focus students with qualitative feedback about their performance that is aligned with the learning objectives. Specific feedback includes such things as pointing to successful use of a strategy, naming a type of problem successfully solved, pointing to and naming errors, suggesting information that would help solve the problem successfully.
- For a learning segment on equivalent fractions, examples of specific feedback are, "You were able to find an equivalent fraction and show how the two fractions were equal." (STRENGTH) OR "When you were finding an equivalent fraction, I see that you changed the denominator, but the numerator didn't change. How would the number of pieces that you have change if the size of the pieces changes?" (NEED)
- Checkmarks, stars, points deducted, grades, or scores do not meet the Level 3, even when they distinguish errors from correct responses.

Below 3

Evidence that demonstrates performance below 3:

- Evidence of feedback is general, unrelated to the assessed learning objectives, developmentally inappropriate, inaccurate, or missing for one or more focus students.

What distinguishes a Level 2 from a Level 3: At Level 2,

- Although the feedback is related to the assessed learning objectives, it is also vague and does not identify specific strengths or needs for improvement. At Level 2, general feedback includes identifying what each focus student did or did not do successfully with little detail, e.g., checkmarks for correct responses, points deducted, and comments such as, "Watch out for negative signs!" that are not linked to a specific strength or need. General feedback does not address the specific error or correct solution (e.g., "Check your work" or "Yes!" or "You are on the right track! Keep up the good work finding equivalent fractions. You are just missing one step—you are almost there.").

What distinguishes a Level 1 from a Level 2: There are **two different ways** that evidence is scored at Level 1:

1. Feedback is not related to the learning objectives. Feedback that is limited to a single statement or mark, such as identifying the total percent correct (86%), an overall letter grade (B), or one comment like "Nice work!" with no other accompanying comments or grading details does not meet the Level 2 requirement and should be scored at a Level 1. These examples of a single piece of feedback do not provide **any** general feedback to focus students that is related to the learning objectives.
2. Feedback is not developmentally appropriate.

Automatic Score of 1 is given when:

- Feedback includes content inaccuracies that will misdirect the focus student(s).
- There is no evidence of feedback for the analyzed assessment for one or more focus students. This includes when there is only a description of feedback rather than actual feedback (video, audio or written) presented to the focus student(s).

Above 3

Evidence that demonstrates performance <u>above 3</u>:

- Feedback is specific, accurate, related to assessed learning objectives, and addresses students' strengths AND needs.

What distinguishes a Level 4 from a Level 3: At Level 4,

- Specific feedback addresses both strengths and needs. For example, "You were able to draw accurate representations of two equivalent fractions and show how they are the same (STRENGTH). You did a great job setting up the equation correctly to find an equivalent fraction, but make sure that the answer is in the simplest form" (NEED).

What distinguishes a Level 5 from a Level 4: At Level 5, the candidate meets Level 4 **AND**

- The feedback for at least one focus student includes:
  - A strategy to address a specific learning need, including the need for a greater challenge. For example, "You got the right answer. Make sure you slow down and show all of your work."

  OR

  - A meaningful connection to experience or prior learning. For example, the candidate refers back to a prior math lesson: "I want you to visualize the new situation as you did in the problem you solved yesterday, to be able to compare the two different pizzas. Then sketch the pizzas and label all the parts before you work on solving it. This will help you see the problem as you solve it."

Assessment Rubric 13: Student Understanding and Use of Feedback

EM13: How does the candidate support focus students to understand and use the feedback to guide their further learning?

The Guiding Question

The Guiding Question addresses how the candidate explains how they will help focus students understand and use the feedback provided in order to improve their learning.

Key Concepts of Rubric:

- N/A

Primary Sources of Evidence:

Assessment Commentary **Prompt 2c**

Evidence of written or oral feedback

Scoring Decision Rules

► **Multiple Criteria**	■ N/A for this rubric
► **AUTOMATIC 1**	■ None

Unpacking Rubric Levels

Level 3

Evidence that demonstrates performance at <u>Level 3</u>:

- Candidate describes <u>how</u> the focus students will understand **OR** use feedback related to the learning objectives. This description needs to relate to the feedback given to one or more of the focus students.
- The description should be specific enough that you understand what the candidate and/or students are going to do. Otherwise, it is vague and the evidence should be scored at Level 2.
  - Example for *understanding* feedback: Candidate reviews work with whole class focusing on common mistakes that explicitly includes content that one or more focus students were given feedback on.
  - Example for *using* feedback: Candidate asks focus students to revise work using feedback given and resubmit revised work.

Below 3

Evidence that demonstrates performance <u>below 3</u>:

- Opportunities for understanding or using feedback are superficially described or absent.

What distinguishes a Level 2 from a Level 3: At Level 2,

- The description of how focus students will understand or use feedback is very general or superficial. Details about how the focus students will understand or use the feedback are missing (e.g., "The students will use the feedback on their next assignment," or, description discusses whole class understanding or use of feedback without explicit attention to feedback given to one or more focus students).
- The use of feedback is not clearly related to the assessed learning objectives.

What distinguishes a Level 1 from a Level 2: At Level 1,

- Opportunities for understanding or using feedback are not described **OR**
- There is NO evidence of feedback for two or more focus students.

Above 3

Evidence that demonstrates performance above 3:

- Support for the focus students to understand **AND** use feedback is described in enough detail to understand how the focus students will develop in areas identified for growth and/or continue to deepen areas of strength.

What distinguishes a Level 4 from a Level 3: At Level 4,

- The candidate describes planned or implemented support for the focus students to understand and use feedback on their strengths OR weaknesses to further develop their learning in relation to the learning objectives. For example, a candidate may work with focus students in a small group and reteach several concepts they struggled with on their assessment (as noted by feedback given), using a graphic organizer to further develop understanding of each concept (such as a T-chart). Next, students would be given an opportunity to revise their responses involving those concepts, using the graphic organizer to support their revisions. This example shows how a candidate can help focus students understand their feedback in relation to misunderstandings and support them in using that feedback to enhance learning in relation to objectives assessed. This type of planned support could take place with the whole class as long as explicit attention to one or more of the focus student's strengths or weaknesses is addressed in relation to the feedback given.

What distinguishes a Level 5 from a Level 4: At Level 5,

- The candidate describes planned or implemented support for the focus students to understand and use feedback on their strengths AND weaknesses related to the learning objectives.

Assessment Rubric 14: Analyzing Students' Language Use and Mathematics Learning

EM14: How does the candidate analyze students' use of language to develop content understanding?

The Guiding Question

The Guiding Question addresses how the candidate explains the opportunities students had to use the academic language associated with the identified language function. These opportunities should support understanding of the central focus and develop mathematical understanding.

Key Concepts of Rubric:

Use the definitions below and the subject-specific Academic Language handout to further clarify concepts on Rubric 14.

- **language demands**—Specific ways that academic language (vocabulary, functions, discourse, syntax) is used by students to participate in learning tasks through reading, writing, listening, and/or speaking to demonstrate their disciplinary understanding.
- **language functions**—Purpose for which language is used. The content and language focus of the learning task, often represented by the active verbs within the learning outcomes. Common language functions in mathematics include describing mathematical phenomena, predicting from models and data, comparing based on common attributes, summarizing mathematical information, explaining multiple ways to solve problems, justifying conclusions, evaluating data and mathematical representations, classifying based on attributes, and explaining how or why certain strategies work.
- **vocabulary and/or symbols**—Words and phrases that are used within disciplines including: (1) words and phrases with subject-specific meanings that differ from meanings used in everyday life (e.g., table, product); (2) general academic vocabulary used across disciplines (e.g., compare, analyze, evaluate); and (3) subject-specific words defined for use in the discipline (e.g., addend, ratio). This includes symbols that are used to communicate mathematical language (e.g., =, +, ÷, ×).
- **discourse**—How members of the discipline talk, write, and participate in knowledge construction, using the structures of written and oral language. Discipline-specific discourse has distinctive features or ways of structuring oral or written language (text structures) that provide useful ways for the content to be communicated. In mathematics, language structures include graphic representations such as tables and graphs (which are shorthand language for summarizing complex sets of data), and narratives (e.g., making conjectures, interpreting word problems, explanations of problem solutions). If the function is to compare, then appropriate language forms could include narratives structured to include sentences such as "The _____ is longer/larger/heavier than the _____."
- **syntax**—The rules for organizing words or symbols together into phrases, clauses, sentences or visual representations (e.g., graphs, tables). One of the main functions of syntax is to organize language in order to convey meaning.

- **language supports**—The scaffolds, representations, and pedagogical strategies teachers intentionally provide to help learners understand and use the concepts and language they need to learn within disciplines. The language supports planned within the lessons in edTPA should directly support learners to understand and use identified language demands (vocabulary and/or symbols, language function, and syntax or discourse) to deepen content understandings.

Primary Sources of Evidence:

Planning Commentary **Prompt 4**

Assessment Commentary **Prompt 3**

Evidence of Student Language Use (student work samples and/or video evidence) from Instruction Video clips or separate Language Use clip in Assessment)

Scoring Decision Rules

► **Multiple Criteria**	■ N/A for this rubric
► **AUTOMATIC 1**	■ None

Unpacking Rubric Levels

Level 3

Evidence that demonstrates performance <u>at Level 3</u>:

- The candidate explains and identifies evidence that the students used or attempted to use the language function AND one additional language demand (vocabulary and/or symbols, syntax, or discourse). Note: The language demands discussed in the Assessment Commentary do not have to be the same as those discussed in Task 1.
- It is not sufficient for the candidate to reference an artifact and make a general statement, for example, "As seen in the work samples, the student used the vocabulary in their work sample." The candidate must <u>explain</u> how the students used the identified language reference or identify an example of that use from the, e.g., "Students 1 and 2 used the vocabulary in their work samples and also identified what they did mathematically to go from one step to the next and how they checked the answer (the two components of explanations identified) in their explanations. Student 3 used a mixture of vocabulary and everyday language in the explanation in the work sample (e.g., "take away" instead of "subtract"), but included both components of explanation."

Below 3

Evidence that demonstrates performance <u>below 3</u>:

- The candidate's identification of student's language use is not aligned with the language demands or limited to one language demand.

What distinguishes a Level 2 from a Level 3: At Level 2,

- The candidate's description and/or evidence of students' language use is limited to only one language demand (vocabulary and/or symbols, function, syntax, or discourse).

What distinguishes a Level 1 from a Level 2: At Level 1,

- The candidate identifies language use that is unrelated or not clearly related to the language demands (function, vocabulary and/or symbols, and additional demands) addressed in the Assessment commentary.
- Candidate's description or explanation of language use is not consistent with the evidence provided.

Above 3

Evidence that demonstrates performance above 3:

- Candidate identifies specific evidence of student use of the language function and vocabulary and/or symbols along with at least one other language demand (syntax and/or discourse).
- Candidate explains how evidence of student language represents their development of content understandings, which may include growth and/or struggles with both understanding and expressing content understandings.
- Candidate explains and provides evidence of language use and content learning for students with distinct language needs.

What distinguishes a Level 4 from a Level 3: At Level 4,

- The candidate identifies and explains evidence that students are able to use the language function, vocabulary and/or symbols, AND associated language demands (syntax and/or discourse). The explanation uses specific evidence from the video and/or work samples.
- The candidate's analysis includes evidence of how student language use demonstrates growth and/or struggles in developing content understandings. For example, the candidate notes that, "All students could give a complete explanation using some commonly used vocabulary words, like angles, sides, and solution (e.g., all focus students' responses to question 1, 3, and 4 in work sample). Most of the students could produce detailed explanations (the language function) in terms of general concepts and procedures for finding the missing angles of a triangle (e.g., Students 2 and 3, responses to questions 1–6). However, other students' explanations were incomplete. For example, in Student 1's response to question 3 in the work sample, you can see the student not explaining how he was able to find the size of the unlabeled angle, but giving the answer, suggesting that some students still need support to develop in the area of use of the language function."

What distinguishes a Level 5 from a Level 4: At Level 5, the candidate meets Level 4 **AND**

- Explains and provides evidence that shows how students with distinct language needs are using the language for content learning.

Assessment Rubric 15: Using Assessment to Inform Instruction

EM15: How does the candidate use the analysis of what students know and are able to do to plan next steps in instruction?

The Guiding Question

The Guiding Question addresses how the candidate uses conclusions from the analysis of student work and research or theory to propose the next steps of instruction. Next steps should be related to the standards/objectives assessed and based on the assessment that was analyzed. They should also address the whole class, groups with similar needs, and/or individual students.

Key Concepts of Rubric:

- N/A

Primary Sources of Evidence:

Assessment Commentary **Prompts 1 and 4**

Scoring Decision Rules

► **Multiple Criteria**	■ Criterion 1 (primary): Next steps for instruction ■ Criterion 2: Connections to research/theory ■ Place greater weight or consideration on criterion 1 (next steps for instruction).
► **AUTOMATIC 1**	■ None

Unpacking Rubric Levels

Level 3

Evidence that demonstrates performance <u>at Level 3</u>:

- *Primary Criterion*: The next steps focus on support for student learning that is general for the whole class, not specifically targeted for individual students. The support addresses learning related to the learning objectives that were assessed. For example, Based on the analysis of student work, the candidate identified that the students struggled with finding a common denominator and stated that the class would be continue to work on creating factor trees to more easily identify common denominators when adding fractions.
- *Secondary Criterion*: The candidate refers to research or theory when describing the next steps. The connections between the research/theory and the next steps are vague/not clearly made.

- If evidence meets the primary criterion at Level 3, the rubric is scored at Level 3 **regardless of the evidence for the secondary criterion**.
- If evidence meets the primary criterion at Level 4, and candidate has NO connection to research/theory, the rubric is scored at Level 3.

Below 3

Evidence that demonstrates performance <u>below 3</u>:

- The next steps are not directly focused on student learning needs that were identified in the analysis of the assessment.
- Candidate does not explain how next steps are related to student learning.

What distinguishes Level 2 from Level 3: At Level 2,

- The next steps are related to the analysis of student learning and the standards and learning objectives assessed.
- The next steps address improvements in teaching practice that mainly focus on how the candidate structures or organizes learning tasks, with a superficial connection to student learning. There is little detail on the changes in relation to the assessed student learning. Examples include repeating instruction or focusing on improving conditions for learning such as pacing or classroom management, with no clear connections to how changes address the student learning needs identified.

What distinguishes Level 1 from Level 2: There are **three different ways** that evidence is scored at Level 1:

1. Next steps **do not follow from** the analysis.
2. Next steps are unrelated to the standards and learning objectives assessed.
3. Next steps are **not described in sufficient detail** to understand them, e.g., "more practice" or "go over the test."

Above 3

Evidence that demonstrates performance <u>above 3</u>:

- Next steps are based on the assessment results and provide scaffolded or structured support that is directly focused on specific student learning needs related to conceptual understanding, procedural fluency, and/or problem-solving/reasoning skills, based on the assessment results.
- Next steps are supported by research and/or theory.

What distinguishes Level 4 from Level 3: At Level 4,

- The next steps are clearly aimed at supporting specific student needs for either individuals (2 or more students) or groups with similar needs related to one or more of the three areas of mathematical learning (conceptual understanding, procedural fluency, AND/OR mathematical reasoning and/or problem-solving skills). Candidate should be explicit about how next steps will strategically support individuals or groups and explain how that support will address each individual or group's needs in relation to the area of mathematical learning.
- The candidate discusses how the research or theory is related to the next steps in ways that make some level of sense given their students and central focus. They may cite the research or theory in their discussion, or they may refer to the ideas from the research. Either is acceptable, as long as they clearly connect the research/theory to their next steps.
- Scoring decision rules: To score at Level 4, the candidate must meet the primary criterion at Level 4 and make at least a fleeting, relevant reference to research or theory (meet the second criterion at least at Level 3).

What distinguishes Level 5 from Level 4: At Level 5,

- The next steps are clearly aimed at supporting specific student needs for both individuals AND groups with similar needs related to all three areas of mathematical learning (conceptual understanding, procedural fluency, AND/OR mathematical reasoning and/or problem-solving skills). Candidate should be explicit about how next steps will strategically support individuals and groups and explain how that support will address each individual's and group's needs in relation to the areas of mathematical learning.
- The candidate explains how principles of research or theory support the proposed changes, with clear connections between the principles and the next steps. The explanations are explicit, well-articulated, and demonstrate a thorough understanding of the research or theoretical principles involved.