edTPA stems from a twenty-five-year history of developing performance-based assessments of teaching quality and effectiveness. The Teacher Performance Assessment Consortium (Stanford and AACTE) acknowledges the National Board for Professional Teaching Standards, the Interstate Teacher Assessment and Support Consortium, and the Performance Assessment for California Teachers for their pioneering work using discipline-specific portfolio assessments to evaluate teaching quality. This version of the handbook has been developed with thoughtful input from over six hundred teachers and teacher educators representing various national design teams, national subject matter organizations (AAHPERD, ACEI, ACTFL, AMLE, CEC, IRA, NAEYC, NAGC, NCSS, NCTE, NCTM, NSTA), and content validation reviewers. All contributions are recognized and appreciated.

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Introduction to edTPA Elementary Mathematics

Purpose

The purpose of edTPA Elementary Mathematics, a nationally available performance-based assessment, is to measure novice teachers’ readiness to teach elementary mathematics. The assessment is designed with a focus on student learning and principles from research and theory. It is based on findings that successful teachers:

- develop knowledge of subject matter, content standards, and subject-specific pedagogy
- develop and apply knowledge of varied students’ needs
- consider research and theory about how students learn
- reflect on and analyze evidence of the effects of instruction on student learning

As a performance-based assessment, edTPA is designed to engage candidates in demonstrating their understanding of teaching and student learning in authentic ways.

Overview of the Assessment

The edTPA Elementary Mathematics assessment is composed of three tasks:

1. Planning for Instruction and Assessment
2. Instructing and Engaging Students in Learning
3. Assessing Student Learning

For this assessment, you will first plan 3–5 consecutive mathematics lessons (or, if teaching within a large time block, 3–5 hours of connected instruction) referred to as a learning segment. Consistent with the Common Core State Standards for Mathematics\(^1\) and the Principles and Standards for School Mathematics (NCTM 2000), a learning segment prepared for this assessment should reflect a balanced approach to mathematics. This means your segment should include learning tasks where students have opportunities to develop:

- conceptual understanding
- procedural fluency
- mathematical reasoning and/or problem solving skills
- as well as to communicate precisely.

---

\(^1\) The Common Core State Standards for Mathematics (June 2010) can be found at [http://www.corestandards.org/assets/CCSSI_Math%20Standards.pdf](http://www.corestandards.org/assets/CCSSI_Math%20Standards.pdf). Note that Minnesota and Virginia have not adopted the Common Core State Standards for Mathematics.
You will then teach the lessons, making a videorecording of your interactions with students during instruction. You will also assess, informally and formally, students’ learning throughout the learning segment. Upon completion of the three tasks, you will submit artifacts from the tasks (e.g., lesson plans, clips from your videorecording, assessment materials, instructional materials, student work samples), as well as commentaries that you have written to explain/reflect on the planning, instruction, and assessment components of the task. The artifacts and commentaries for each task will then be evaluated using rubrics especially developed for each task.

You will complete three tasks for edTPA:

1. Planning for Instruction and Assessment
2. Instructing and Engaging Students in Learning
3. Assessing Student Learning

The edTPA Tasks and the Cycle of Effective Teaching

The three edTPA tasks represent a cycle of effective teaching (i.e., teaching that is focused on student learning). The planning task documents your intended teaching, the instruction task documents your enacted teaching, and the assessment task documents the impact of your teaching on student learning.

The three tasks and the evidence you provide for each are framed by your understandings of your students and their learning. As you develop, document, and teach your lessons, you will reflect upon the cyclical relationship among planning, instruction, and assessment with a focus on your students’ learning needs.
Evidence of Teaching Practice: Artifacts and Commentaries

An essential part of the assessment is the evidence you will submit of how you planned, taught, and assessed your lessons to deepen student learning in mathematics. This evidence includes both artifacts and commentaries:

- **Artifacts** represent authentic work completed by you and your students. These include lesson plans, copies of instructional and assessment materials, video clips of your teaching, and student work samples.

- **Commentaries** are your opportunity to describe your artifacts, explain the rationale behind their choice, and analyze what you have learned about your teaching practice and your students' learning. Note that although your writing ability will not be scored directly, commentaries must be clearly written and well focused.

When preparing your artifacts and commentaries, refer to the rubrics frequently to guide your thinking, planning, and writing. Refer to the [Elementary Mathematics Evidence Chart](#) for information about how your evidence should be formatted for electronic submission.

**Evaluation Criteria**

The evidence (i.e., artifacts and commentaries) you submit will be judged on five components of teaching practice:

1. Planning
2. Instruction
3. Assessment
4. Analyzing Teaching
5. Academic Language

You will provide evidence for the planning, instruction, and assessment components within the corresponding tasks. You will provide evidence for the analyzing teaching component across all three tasks. You will provide evidence for the academic language component in the planning task, as well as in the instruction AND/OR assessment task.

The rubrics used to score your performance on the edTPA portfolio are included in this handbook and follow the sections describing the directions for each task. The descriptors in the five-level rubrics address a wide range of performance, beginning with the knowledge and skills of a novice not ready to teach (Level 1) and extending to the advanced practices of a highly accomplished beginner (Level 5).
Structure of the Handbook

The following pages provide specific instructions on how to complete each of the three tasks of the edTPA Elementary Mathematics assessment. After an overview of the tasks, the handbook provides instructions for each task, organized into four sections:

1. **What Do I Need to Think About?**
   This section provides focus questions for you to think about when completing the task.

2. **What Do I Need to Do?**
   This section provides specific, detailed directions for completing the task.

3. **What Do I Need to Write?**
   This section tells you what you need to write and also provides specific and detailed directions for writing the commentary for the task.

4. **How Will the Evidence of My Teaching Practice Be Assessed?**
   This section includes the rubrics that will be used to assess the evidence you provide for the task.

Additional requirements and resources are available to you in this handbook:

- **Professional Responsibilities:** guidelines for the development of your evidence
- **Elementary Mathematics Context for Learning Information:** prompts used to collect information about your school/classroom context
- **Elementary Mathematics Evidence Chart:** specifications for electronic submission of evidence (artifacts and commentaries), including templates, supported file types, number of files, response length, and other important evidence specifications
- **Glossary:** definitions of key terms can be accessed by rolling your cursor over each glossary term marked with a dotted underline throughout the handbook or by referring to the Elementary Mathematics Glossary.

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2 Your preparation program will have additional resources, including the Making Good Choices document, that provide guidance as you develop your evidence.
Review all instructions carefully before beginning to teach the learning segment to ensure that you are well prepared for all tasks. Refer to the Professional Responsibilities section of this handbook for important information about permissions, confidentiality, and other requirements.

If your program requires you to submit artifacts and commentaries for official scoring, refer to www.edTPA.com for complete and current information before beginning your work and to download templates for submitting materials. The website contains information about the registration process, submission deadlines, submission requirements, withdrawal/refund policies, and score reporting. It also provides contact information should you have questions about your registration and participation in edTPA.

Whether submitting directly to www.edTPA.com or via your program’s electronic portfolio management system, follow the submission guidelines as documented in the Evidence Chart and review edTPA Submission Requirements to ensure that your materials conform to the required evidence specifications and requirements for scoring.
<table>
<thead>
<tr>
<th>What to Do</th>
<th>What to Submit</th>
<th>Evaluation Rubrics</th>
</tr>
</thead>
</table>

- Select one class as a focus for this assessment.
- Provide relevant context information.
- Identify a learning segment to plan, teach, and analyze student learning. Select a learning segment of **3–5 consecutive lessons** (or, if teaching mathematics within a large time block, about **3–5 hours of connected instruction**).
- Identify a central focus. The central focus should support students to develop conceptual understanding, procedural fluency, and mathematical reasoning and/or problem solving skills.
- Write and submit a lesson plan for each lesson in the learning segment.
- Select and submit key instructional materials needed to understand what you and the students will be doing.
- Respond to commentary prompts prior to teaching the learning segment.
- As part of the commentary, choose one language function to analyze elementary mathematics language demands and identify a learning task where students use that language function. Identify both the language that students will be expected to use to engage in the learning task and your instructional supports.
- Submit copies or directions for all planned assessments from the learning segment.
<table>
<thead>
<tr>
<th>What to Do</th>
<th>What to Submit</th>
<th>Evaluation Rubrics</th>
</tr>
</thead>
</table>
| **Task 2: Instructing and Engaging Students in Learning**  
- Obtain required permissions for videorecording from parents/guardians of your students and other adults appearing in the video.  
- Identify lessons from the learning segment you planned in Task 1 to videorecord. You should choose lessons that show you interacting with students to develop their understanding of mathematics concepts.  
- Videorecord your teaching and select 1 or 2 video clips (no more than 15 minutes total).  
- Analyze your teaching and your students' learning in the video clips by responding to commentary prompts. |  
- Part A: Video Clips  
- Part B: Instruction Commentary | **Instruction Rubrics**  
- Rubric 6: Learning Environment  
- Rubric 7: Engaging Students in Learning  
- Rubric 8: Deepening Student Learning  
- Rubric 9: Subject-Specific Pedagogy: Using Representations  
- Rubric 10: Analyzing Teaching Effectiveness |
## Task 3: Assessing Student Learning

<table>
<thead>
<tr>
<th>What to Do</th>
<th>What to Submit</th>
<th>Evaluation Rubrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select <strong>one</strong> assessment from the learning segment that you will use to evaluate your students’ developing knowledge and skills. Submit the assessment used to evaluate student performance.</td>
<td>Part A: Student Work Samples</td>
<td>Assessment Rubrics</td>
</tr>
<tr>
<td>Define and submit the evaluation criteria you will use to analyze student learning.</td>
<td>Part B: Evidence of Feedback</td>
<td>Rubric 11: Analysis of Student Learning</td>
</tr>
<tr>
<td>Collect and analyze student work from the selected assessment to identify <strong>quantitative and qualitative</strong> patterns of learning within, and across learners in, the class.</td>
<td>Part C: Assessment Commentary</td>
<td>Rubric 12: Providing Feedback to Guide Learning</td>
</tr>
<tr>
<td>Select <strong>3 student work samples</strong> to illustrate your analysis of patterns of learning within, and across learners in, the class. At least 1 of the samples must be from a student with specific learning needs. These 3 students will be your <strong>focus students</strong>.</td>
<td>Part D: Evaluation Criteria</td>
<td>Rubric 13: Student Use of Feedback</td>
</tr>
<tr>
<td>Summarize the learning of the whole class, and refer to work samples from the three focus students to illustrate patterns in student understanding across the class.</td>
<td></td>
<td>Rubric 14: Analyzing Students’ Language Use and Mathematics Learning</td>
</tr>
<tr>
<td>Submit feedback on the assessment for the three focus students in written, audio, or video form.</td>
<td></td>
<td>Rubric 15: Using Assessment to Inform Instruction</td>
</tr>
<tr>
<td>Analyze evidence of students’ language use from (1) the video clips from the instruction task, (2) an additional video clip of one or more students using language within the learning segment, <strong>AND/OR</strong> the student work samples from the assessment task.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analyze your assessment of student learning and plan for next steps by responding to commentary prompts.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Task 1: Planning for Instruction and Assessment

What Do I Need to Think About?

In Task 1: Planning for Instruction and Assessment, you will describe your plans for the learning segment and explain how your instruction is appropriate for the students and the content you are teaching. As you develop your plans, you need to think about the following:

- What do your students know, what can they do, and what are they learning to do?
- What do you want your students to learn? What are the important understandings and core concepts you want students to develop within the learning segment?
- What instructional strategies, learning tasks, and assessments will you design to support student learning and language use?
- How is the teaching you propose supported by research and theory about how students learn?
- How is the teaching you propose informed by your knowledge of students?

Task 1 prepares you to demonstrate and analyze the effectiveness of your teaching of the planned learning segment.

What Do I Need to Do?

- **Select a class.** If you teach more than one class, select one focus class for this assessment.
- **Provide context information.** The Elementary Mathematics Context for Learning Information form is provided later in this handbook and must be submitted in a template. This form provides essential information about your students and your school/classroom. The context information you submit should be **no more than 3 pages, including the prompts.**
- **Identify a learning segment to plan, teach, and analyze.** Review the curriculum with your cooperating teacher and select a learning segment of **3–5 consecutive lessons.** (If teaching mathematics within a large time block, select a learning segment of about **3–5 hours of connected instruction**).
- **Identify a central focus.** Identify the central focus along with the content standards and objectives you will address in the learning segment. The central focus should support students to develop
  - conceptual understanding
  - procedural fluency
  - mathematical reasoning and/or problem solving skills
Analyze language demands. Select a key language function, a learning task, and additional language demands required by the task.

Write a lesson plan for each lesson in the learning segment. If you are planning for a group rather than the full class, plans should describe instruction for that group. Your lesson plans should be detailed enough that a substitute or other teacher could understand them well enough to use them. If your teacher preparation program requires you to use a specific lesson-plan format for this assessment, you must include the information described below.

Your lesson plans should include the following information:

- State-adopted student academic content standards and/or Common Core State Standards for Mathematics that are the target of student learning. (Note: Please list the number and text of each standard that is being addressed. If only a portion of a standard is being addressed, then only list the part or parts that are relevant.)
- Learning objectives associated with the content standards
- Informal and formal assessments used to monitor student learning, including type(s) of assessment and what is being assessed
- Instructional strategies and learning tasks (including what you and the students will be doing) that support diverse student needs
- Instructional resources and materials used to engage students in learning

Lesson plans must be no more than 4 pages in length. You will need to condense or excerpt lesson plans longer than 4 pages. Any rationale for decisions or explanations should be included in your Planning Commentary and deleted from your plans.

Respond to the commentary prompts listed in the Planning Commentary section prior to teaching the learning segment.

Submit your original lesson plans. If you make changes while teaching the learning segment, you may offer reflection on those changes in the Instruction and Assessment Commentaries that are part of Tasks 2 and 3.

Select and submit key instructional materials needed to understand what you and the students will be doing (no more than 5 pages per lesson plan). The instructional materials might include such items as class handouts, assignments, slides, and interactive whiteboard images.

Submit copies of all written assessments. (Submit only the blank assessment given to students; do not submit student work samples.)

See the Task 1: Artifacts and Commentary Specifications in the Elementary Mathematics Evidence Chart for instructions on electronic submission of evidence. This evidence chart identifies templates, supported file types, number of files, response length, and other important evidence specifications.
What Do I Need to Write?

In Task 1: Planning for Instruction and Assessment, you will write

- a description of your context for learning (see “What Do I Need to Do?” above for directions)
- lesson plans (see “What Do I Need to Do?” above for directions)
- a commentary explaining your plans (see “Planning Commentary” below for directions)

Planning Commentary

In Task 1: Planning for Instruction and Assessment, you will write a commentary, responding to the prompts below. Your commentary should be no more than 9 single-spaced pages, including the prompts.

1. **Central Focus**
   a. Describe the central focus and purpose for the content you will teach in the learning segment.
   b. Given the central focus, describe how the standards and learning objectives within your learning segment address
      - conceptual understanding
      - procedural fluency
      - mathematical reasoning OR problem-solving skills
   c. Explain how your plans build on each other to help students make connections between
      - facts
      - concepts
      - computations/procedures
      - mathematical reasoning or problem solving strategies to deepen their learning of mathematics

2. **Knowledge of Students to Inform Teaching**
   For each of the prompts below (2a–c), describe what you know about your students with respect to the central focus of the learning segment.

Consider the variety of learners in your class who may require different strategies/support (e.g., students with IEPs, English language learners, struggling readers, underperforming students or those with gaps in academic knowledge, and/or gifted students).
a. **Prior academic learning and prerequisite skills** related to the central focus—**What do students know, what can they do, and what are they learning to do?**

b. **Personal/cultural/community assets** related to the central focus—**What do you know about your students’ everyday experiences, cultural backgrounds and practices, and interests?**

c. **Mathematical dispositions** related to the central focus—**What do you know about the extent to which your students**

- perceive mathematics as “sensible, useful, and worthwhile”³
- persist in applying mathematics to solve problems
- believe in their ability to learn mathematics

3. **Supporting Students’ Mathematics Learning**

Respond to prompts below (3a–c). To support your explanations, refer to the instructional materials and lesson plans you have included as part of Task 1. In addition, use principles from research and/or theory to support your explanations.

a. Explain how your understanding of your students’ prior academic learning and personal/cultural/community assets (from prompts 2a–b above) guided your choice or adaptation of learning tasks and materials.

b. Describe and justify why your instructional strategies and planned supports are appropriate for the whole class, individuals, and/or groups of students with specific learning needs. Consider students with IEPs, English language learners, struggling readers, underperforming students or those with gaps in academic knowledge, and/or gifted students.

c. Describe common mathematical preconceptions, errors, or misunderstandings within your central focus and how you will address them.

4. **Supporting Mathematics Development Through Language**

a. **Language Function.** Choose one language function essential for student learning within your central focus. Listed below are some sample language functions. You may choose one of these or another language function more appropriate for your learning segment:

<table>
<thead>
<tr>
<th>Categorize</th>
<th>Compare/contrast</th>
<th>Describe</th>
<th>Interpret</th>
<th>Model</th>
</tr>
</thead>
</table>

b. Identify a key learning task from your plans that provides students with opportunities to practice using the language function identified above. Identify the lesson in which the learning task occurs. (Give lesson day/number.)

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³ From the Common Core State Standards for Mathematics
c. **Additional Language Demands.** Given the language function and learning task identified above, describe the following associated language demands (written or oral) students need to understand and/or use:

- **Vocabulary and/or symbols**
- **Plus** at least one of the following:
  - Syntax
  - Discourse

Consider the range of students’ understandings of the language function and other language demands—what do students already know, what are they struggling with, and/or what is new to them?

d. **Language Supports.** Refer to your lesson plans and instructional materials as needed in your response to the prompt.

- Describe the instructional supports (during and/or prior to the learning task) that help students understand and successfully use the language function and additional language demands identified in prompts 4a–c.

5. **Monitoring Student Learning**

In response to the prompts below, refer to the assessments you will submit as part of the materials for Task 1.

- a. Describe how your planned formal and informal assessments will provide direct evidence of students’ conceptual understanding, computational/procedural fluency, and mathematical reasoning and/or problem solving skills throughout the learning segment.

- b. Explain how the design or adaptation of your planned assessments allows students with specific needs to demonstrate their learning.

Consider all students, including students with IEPs, English language learners, struggling mathematics students, underperforming students or those with gaps in academic knowledge, and/or gifted students.

**How Will the Evidence of My Teaching Practice Be Assessed?**

For Task 1: Planning for Instruction and Assessment, your evidence will be assessed with rubrics 1–5, which appear in the following pages. When preparing your artifacts and commentaries, refer to the rubrics frequently to guide your thinking, planning, and writing.
# Planning Rubrics

## Rubric 1: Planning for Mathematical Understandings

How do the candidate’s plans build students’ conceptual understanding, procedural fluency, and mathematical reasoning/problem solving skills?

<table>
<thead>
<tr>
<th>Level 1*</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate’s plans <strong>focus solely on</strong> facts and/or procedures with <strong>no connections</strong> to concepts or reasoning/problem solving skills.</td>
<td>Plans for instruction <strong>support student learning of facts and procedures</strong> with <strong>vague connections to concepts</strong> OR <strong>reasoning/problem solving skills.</strong></td>
<td>Plans for instruction <strong>build on each other</strong> to support learning of facts and procedures with <strong>clear connections to concepts</strong> OR <strong>reasoning/problem solving skills.</strong></td>
<td>Plans for instruction build on each other to support learning of facts and procedures with <strong>clear and consistent connections to concepts</strong> AND <strong>reasoning/problem solving skills.</strong></td>
<td><strong>Level 4 plus:</strong> Candidate explains how they will use learning tasks and materials to <strong>lead students to make</strong> clear and consistent connections.</td>
</tr>
</tbody>
</table>

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>There are significant content inaccuracies</strong> that will lead to student misunderstandings.</td>
<td>OR</td>
<td>Standards, objectives, and learning tasks and materials are <strong>not aligned with each other.</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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4 Text representing key differences between adjacent score levels is shown in bold. Evidence that does not meet Level 1 criteria is scored at Level 1.
**Rubric 2: Planning to Support Varied Student Learning Needs**

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

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is little or no evidence of planned supports.</td>
<td>Planned supports are <strong>loosely tied to learning objectives or the central focus of the learning segment.</strong> AND Candidate attends to requirements in IEPs and 504 plans.</td>
<td>Planned supports are <strong>tied to learning objectives and the central focus with attention to the characteristics of the class as a whole.</strong> AND Candidate attends to requirements in IEPs and 504 plans.</td>
<td>Planned supports are tied to learning objectives and the central focus. <strong>Supports address the needs of specific individuals or groups with similar needs.</strong> AND Candidate attends to requirements in IEPs and 504 plans.</td>
<td>Level 4 plus: Supports include specific strategies to identify and respond to preconceptions, common errors, and misunderstandings.</td>
</tr>
</tbody>
</table>
Rubric 3: Using Knowledge of Students to Inform Teaching and Learning

| How does the candidate use knowledge of his/her students to justify instructional plans? |
|---|---|---|---|---|
| **Level 1** | **Level 2** | **Level 3** | **Level 4** | **Level 5** |
| Candidate’s justification of learning tasks is either missing OR represents a deficit view of students and their backgrounds. | Candidate justifies learning tasks with limited attention to students’ prior academic learning OR personal/cultural/community assets. | Candidate **justifies** why learning tasks (or their adaptations) are appropriate using
  - examples of students’ prior academic learning
  OR
  - examples of personal/cultural/community assets
Candidate makes superficial connections to research and/or theory. | Candidate justifies why learning tasks (or their adaptations) are appropriate using
  - examples of students’ prior academic learning
  - examples of personal/cultural/community assets
Candidate makes connections to research and/or theory. | **Level 4 plus:**
Candidate’s justification is supported by **principles from** research and/or theory. |
# Rubric 4: Identifying and Supporting Language Demands

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

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language demands&lt;sup&gt;5&lt;/sup&gt; identified by the candidate are not consistent with the selected language function&lt;sup&gt;6&lt;/sup&gt; OR task. OR</td>
<td>Candidate identifies vocabulary and/or symbols as the major language demand associated with the language function. Attention to additional language demands is superficial. Language supports primarily address definitions of vocabulary and/or symbols.</td>
<td>Candidate identifies vocabulary and/or symbols AND additional language demand(s) associated with the language function. Plans include general support for use of vocabulary and/or symbols as well as additional language demand(s).</td>
<td>Candidate identifies vocabulary and/or symbols AND additional language demand(s) associated with the language function. Plans include targeted support for use of vocabulary and/or symbols as well as additional language demand(s).</td>
<td>Level 4 plus: Instructional supports are designed to meet the needs of students with different levels of language learning.</td>
</tr>
</tbody>
</table>

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<sup>5</sup> Language demands include: language function, vocabulary, syntax, and discourse (organizational structures, text structure, etc.).

<sup>6</sup> Language function refers to the learning outcome (verb) selected in prompt 4a (e.g., categorize, describe…).
Rubric 5: Planning Assessments to Monitor and Support Student Learning

<table>
<thead>
<tr>
<th>How are the informal and formal assessments selected or designed to monitor students’ conceptual understanding, procedural fluency, and reasoning/problem solving skills?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>The assessments only provide evidence of students’ procedural skills or factual knowledge.</td>
</tr>
<tr>
<td>Assessment adaptations required by IEP or 504 plans are NOT made.</td>
</tr>
<tr>
<td>Assessments are NOT aligned with the central focus and standards/objectives for the learning segment.</td>
</tr>
</tbody>
</table>
Task 2: Instructing and Engaging Students in Learning

What Do I Need to Think About?

In Task 2: Instructing and Engaging Students in Learning, you will demonstrate how you support and engage students in learning. Before you begin your instruction, you need to think about the following:

- What kind of learning environment do you want to develop in order to establish respect and rapport, and to support students’ engagement in learning?
- What kinds of learning tasks actively engage students in the central focus of the learning segment?
- How will you elicit and build on student responses in ways to develop and deepen content understanding?
- In what ways will you connect new content to your students’ prior academic learning and personal, cultural, or community assets during your instruction?
- How will you use evidence from your instruction to examine and change your teaching practices to more effectively meet a variety of student learning needs?

What Do I Need to Do?

- **Obtain required permission for videorecording.** Before you record your video, ensure that you have the appropriate permission from the parents/guardians of your students and from adults who appear in the video. Adjust the camera angle to exclude individuals for whom you do not have permission to film.

- **Examine your lesson plans for the learning segment** and identify challenging learning tasks in which you and your students are actively engaged. The video clips you select for submission should provide a sample of how you interact with students to develop understanding of mathematical concepts.

- **Identify lessons to videorecord.**
  - Provide 1–2 video clips (together totaling no more than 15 minutes) that demonstrate how you engage students in developing understandings of mathematical concepts.
  - Determine whether you will feature the whole class or a targeted group of students within the class.
  - **(Optional)** Provide evidence of students’ language use. You may provide evidence of language use with your video clips from Task 2, an additional video clip of one or more students using language within the learning segment (no more than 5 minutes in length), AND/OR through the student work samples analyzed in Task 3.
Video record your classroom teaching. Tips for videorecording your class are available from your teacher preparation program.

Select 1–2 video clips to submit and verify that the clips meet the following requirements:

- A video clip must be continuous and unedited, with no interruption in events.
- Check the video and sound quality to ensure that you and your students can be seen and heard on the video clips you submit.
- Do not include the name of the state, school, or district in your video. Use first names only for all individuals appearing in the video.

Respond to the prompts listed in the Instruction Commentary section below after viewing the video clips.

Determine if additional information is needed to understand what you and the students are doing in the video clips. For example, if there are graphics, texts, or images that are not clearly visible in the video, or comments that are not clearly heard, insert digital copies or transcriptions at the end of the Instruction Commentary (no more than 2 pages).

See the Task 2: Artifacts and Commentary Specifications in the Elementary Mathematics Evidence Chart for instructions on electronic submission of evidence. This chart identifies templates, supported file types, number of files, response length, and other important evidence specifications.

What Do I Need to Write?

Instruction Commentary

In Task 2: Instructing and Engaging Students in Learning, you will write a commentary, responding to the prompts below. Your commentary should be no more than 6 single-spaced pages, including the prompts.

1. Which lesson or lessons are shown in the video clips? Identify the lesson(s) by lesson plan number.

2. Promoting a Positive Learning Environment
   - In response to the prompt, refer to scenes in the video clips where you provided a positive learning environment.
   - How did you demonstrate mutual respect for, rapport with, and responsiveness to students with varied needs and backgrounds, and challenge students to engage in learning?

3. Engaging Students in Learning
   - Refer to examples from the video clips in your responses to the prompts.
     a. Explain how your instruction engaged students in developing understanding of mathematical concepts.
b. Describe how your instruction linked students’ prior academic learning and personal, cultural, and community assets with new learning.

4. **Deepening Student Learning during Instruction**

Refer to examples from the video clips in your explanations.

a. Explain how you elicited and built on student responses to promote thinking and develop understandings of mathematical concepts.

b. Explain how you used representations (manipulatives, models, tools, diagrams, charts) to support students’ understanding and use of mathematical concepts.

5. **Analyzing Teaching**

Refer to examples from the video clips in your responses to the prompts.

a. What changes would you make to your instruction—for the whole class and/or for students who need greater support or challenge—to better support student learning of the central focus (e.g., missed opportunities)?

   Consider the variety of learners in your class who may require different strategies/support (such as students with IEPs, English language learners, struggling readers, underperforming students or those with gaps in academic knowledge, and/or gifted students).

b. Why do you think these changes would improve student learning? Support your explanation with evidence of student learning and principles from theory and/or research.

---

**How Will the Evidence of My Teaching Practice Be Assessed?**

For Task 2: Instructing and Engaging Students in Learning, your evidence will be assessed using rubrics 6–10, which appear in the following pages. When preparing your artifacts and commentaries, refer to the rubrics frequently to guide your thinking, instruction, and writing.
# Instruction Rubrics

## Rubric 6: Learning Environment

### How does the candidate demonstrate a respectful learning environment that supports students’ engagement in learning?

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>The clips reveal evidence of disrespectful interactions between teacher and students or between students.</td>
<td>The candidate demonstrates respect for students. Candidate provides a learning environment that serves primarily to control student behavior, and minimally supports the learning goals.</td>
<td>The candidate demonstrates rapport with and respect for students. Candidate provides a positive, low-risk social environment that reveals mutual respect among students.</td>
<td>The candidate demonstrates rapport with and respect for students. Candidate provides a challenging learning environment that promotes mutual respect among students.</td>
<td>The candidate demonstrates rapport with and respect for students. Candidate provides a challenging learning environment that promotes opportunities to express varied perspectives and promotes mutual respect among students.</td>
</tr>
</tbody>
</table>

OR

Candidate allows disruptive behavior to interfere with student learning.
### Rubric 7: Engaging Students in Learning

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

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the clips, <strong>students are participating in tasks that are vaguely or superficially related to the central focus.</strong></td>
<td>In the clips, <strong>students are participating</strong> in learning tasks focusing primarily on mathematical skills or procedures with little attention to developing understanding of mathematical concepts.</td>
<td>In the clips, <strong>students are engaged</strong> in learning tasks that <strong>address</strong> understandings of mathematical concepts.</td>
<td>In the clips, students are engaged in learning tasks that <strong>develop</strong> understandings of mathematical concepts.</td>
<td>In the clips, students are engaged in learning tasks that <strong>deepen and extend</strong> their understandings of mathematical concepts.</td>
</tr>
<tr>
<td>There is little or no evidence that the candidate <strong>links students' prior academic learning or personal, cultural, or community assets with new learning.</strong> OR</td>
<td>Candidate makes vague or superficial links between <strong>prior academic learning and new learning.</strong></td>
<td>Candidate <strong>links prior academic learning to new learning.</strong></td>
<td>Candidate links both <strong>prior academic learning and personal, cultural, or community assets to new learning.</strong></td>
<td>Candidate <strong>prompts students to link</strong> prior academic learning and personal, cultural, or community assets to new learning.</td>
</tr>
</tbody>
</table>
Rubric 8: Deepening Student Learning

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>The candidate does most of the talking and students provide few responses.</td>
<td>Candidate primarily asks surface-level questions and evaluates student responses as correct or incorrect.</td>
<td>Candidate elicits student responses related to reasoning/problem solving to develop understanding of a mathematical concept.</td>
<td>Candidate elicits and builds on students' reasoning/problem solving to explicitly portray, extend, or clarify a mathematical concept.</td>
<td>Level 4 plus: Candidate facilitates interactions among students to develop understandings of a mathematical concept.</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Candidate responses include significant content inaccuracies that will lead to student misunderstandings.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Rubric 9: Subject-Specific Pedagogy: Using Representations

| How does the candidate use representations to develop students’ mathematical concepts? |
|---|---|---|---|---|
| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
| The candidate stays focused on facts or procedures with little or no attention to mathematical concepts. OR Materials used in the clips include significant content inaccuracies that will lead to student misunderstandings. | Candidate makes vague or superficial use of representations to help students understand mathematical concepts. | Candidate uses representations in ways that help students understand mathematical concepts. | Candidate uses representations in ways that deepen student understanding of mathematical concepts. | Level 4 plus: Candidate facilitates interactions among students so they develop or apply representations in ways that deepen and extend their understanding of mathematical concepts. |
Rubric 10: Analyzing Teaching Effectiveness

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

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate suggests changes unrelated to evidence of student learning.</td>
<td>Candidate proposes changes that are focused primarily on improving directions for learning tasks or task/behavior management.</td>
<td>Candidate proposes changes that address students’ collective learning needs related to the central focus.</td>
<td>Candidate proposes changes that address individual and collective learning needs related to the central focus.</td>
<td>Level 4 plus: Candidate justifies changes using principles of research and/or theory.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Candidate makes superficial connections to research and/or theory.</td>
<td>Candidate makes connections to research and/or theory.</td>
<td></td>
</tr>
</tbody>
</table>

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Task 3: Assessing Student Learning

What Do I Need to Think About?

In Task 3: Assessing Student Learning, you will analyze both student learning and student use of language. Before you begin the analysis, you need to think about the following:

- How will you gather evidence and make sense of what students have learned?
- How will you provide meaningful feedback to your students?
- How will you use evidence of what students know and are able to do to plan next steps in instruction?
- How will you identify evidence and explain students’ use of language that demonstrates the development of content understanding?

What Do I Need to Do?

- **Determine which assessment from your learning segment you will use** to evaluate your students’ developing knowledge and skills. It should be an assessment that is completed by the entire class featured in the learning segment. The assessment should reflect the work of individuals, not groups, but may be individual work from a group task. The assessment should provide opportunities for students to demonstrate:
  - conceptual understanding
  - procedural fluency
  - mathematical reasoning or problem solving skills

- **Define and submit the evaluation criteria** you will use to analyze student learning related to the mathematical understandings described above.

- **Collect and analyze student work** from the selected assessment to identify quantitative and qualitative patterns of learning within, and across learners in, the class.

- **Select 3 student work samples** that represent the patterns of learning (i.e., what individuals or groups generally understood and what a number of students were still struggling to understand) you identified in your assessment analysis. These students will be your focus students for this task. At least one of the students must have specific learning needs, for example, a student with an IEP (Individualized Education Program), an English language learner, a struggling reader, an underperforming student or a student with gaps in academic knowledge, and/or a gifted student needing greater support or challenge.

- **Document the feedback** you gave to each of the 3 focus students either on the work sample itself, as an audio clip, or as a video clip.

- **If you submit feedback as a video or audio clip and your comments to focus students cannot be clearly heard**, attach transcriptions of your comments (no more than 2 pages) to the end of the Assessment Commentary.
If you submit feedback to focus students as a video or audio clip and additional students are present, clearly identify which students are your focus students at the end of the Assessment Commentary (in no more than two sentences).

Respond to the prompts listed in the Assessment Commentary section below after analyzing student work from the selected assessment.

Include and submit the selected assessment, including directions/prompts provided to students. Attach the assessment (no more than 5 pages) to the end of the Assessment Commentary.

Provide evidence of students’ understanding and use of the targeted academic language function. You may choose evidence from the video clips submitted in Task 2, an additional video clip of one or more students using language within the learning segment (no more than 5 minutes in length), AND/OR student work samples submitted in Task 3.

See the Task 3: Artifacts and Commentary Specifications in the Elementary Mathematics Evidence Chart for instructions on electronic submission of evidence. This evidence chart identifies templates, supported file types, number of files, response length, and other important evidence specifications.

What Do I Need to Write?

Assessment Commentary

In Task 3: Assessing Student Learning, you will write a commentary, responding to the prompts below. Your commentary should be no more than 10 single-spaced pages, including the prompts.

1. Analyzing Student Learning

   a. Identify the specific standards/objectives measured by the assessment you chose for analysis.

   b. Provide the evaluation criteria you used to analyze student learning.

   c. Provide a graphic (table or chart) or narrative that summarizes student learning for your whole class. Be sure to summarize student learning for all evaluation criteria described above.

   d. Use evidence found in the 3 student work samples and the whole class summary to analyze the patterns of learning for the whole class and differences for groups or individual learners relative to

      - conceptual understanding
      - procedural fluency
      - mathematical reasoning or problem solving skills

Consider what students understand and do well, and where they continue to struggle (e.g., common errors, confusions, need for greater challenge).
2. Feedback to Guide Further Learning

Refer to specific evidence of submitted feedback to support your explanations.

a. In what form did you submit your evidence of feedback for the 3 focus students?
   - Written directly on work samples or in a separate document
   - In audio files; or
   - In video clips from the instruction task (provide a time-stamp reference) or in a separate video clip

b. Explain how feedback provided to the 3 focus students addresses their individual strengths and needs relative to the learning targets measured.

c. How will you support students to apply the feedback to guide improvement, either within the learning segment or at a later time?

3. Evidence of Language Understanding and Use

You may provide evidence of students' language use from ONE, TWO OR ALL THREE of the following sources:

1. Use video clips from Task 2 and provide time-stamp references for language use.

2. Submit an additional video file named “Language Use” of no more than 5 minutes in length and provide time-stamp references for student language use (this can be footage of one or more students' language use). Submit the clip in Task 3 Part B.

3. Use the student work samples analyzed in Task 3 and cite language use.

When responding to the prompt below, use concrete examples from the video clips (using time-stamp references) and/or student work samples as evidence. Evidence from the clips may focus on one or more students.

- Explain and provide evidence for the extent to which your students were able to use or struggled to use language (selected function, vocabulary, and additional identified language demands from Task 1) to develop content understandings.

4. Using Assessment to Inform Instruction

a. Based on your analysis of student learning presented in prompts 1c–d, describe next steps for instruction
   - for the whole class
   - for the 3 focus students and other individuals/groups with specific needs

Consider the variety of learners in your class who may require different strategies/support (e.g., students with IEPs, English language learners, struggling readers, underperforming students or those with gaps in academic knowledge, and/or gifted students needing greater support or challenge).

b. Explain how these next steps follow from your analysis of student learning. Support your explanation with principles from research and/or theory.
How Will the Evidence of My Teaching Practice Be Assessed?

For Task 3: Assessing Student Learning, your evidence will be assessed using rubrics 11–15, which appear in the following pages. When preparing your artifacts and commentaries, refer to the rubrics frequently to guide your thinking, planning, instruction, assessment, and writing.
## Rubric 11: Analysis of Student Learning

How does the candidate analyze evidence of student learning of conceptual understanding, procedural fluency, and reasoning/problem solving skills?

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>The analysis is <strong>superficial or not supported</strong> by either student work samples or the summary of student learning. OR The evaluation criteria, learning objectives, and/or analysis are <strong>not aligned with each other</strong>.</td>
<td>The analysis <strong>focuses on what students did right OR wrong</strong> using evidence from the summary or work samples.</td>
<td>The analysis focuses on what students did right <strong>AND wrong</strong> and is <strong>supported with evidence</strong> from the summary and work samples. <strong>Analysis includes some differences in whole class learning.</strong></td>
<td>Analysis uses <strong>specific examples</strong> from work samples to <strong>demonstrate patterns of student learning consistent with the summary.</strong> Patterns are described for whole class.</td>
<td>Analysis uses specific evidence from work samples to <strong>demonstrate the connections between quantitative and qualitative patterns of student learning for individuals or groups.</strong></td>
</tr>
</tbody>
</table>
### Rubric 12: Providing Feedback to Guide Learning

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

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback is unrelated to the learning objectives OR is inconsistent with the analysis of the student’s learning. OR Feedback contains significant content inaccuracies. OR Feedback is developmentally inappropriate.</td>
<td>Feedback addresses only errors OR strengths generally related to the learning objectives. OR Feedback is inconsistently provided to focus students.</td>
<td>Feedback is accurate and primarily focuses on either errors OR strengths related to specific learning objectives, with some attention to the other. Feedback is provided consistently for the focus students.</td>
<td>Feedback is accurate and addresses both strengths AND needs related to specific learning objectives. Feedback is provided consistently for the focus students.</td>
<td>Level 4 plus: Candidate describes how s/he will guide focus students to use feedback to evaluate their own strengths and needs.</td>
</tr>
</tbody>
</table>
**Rubric 13: Student Use of Feedback**

How does the candidate provide opportunities for focus students to use the feedback to guide their further learning?

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunities for applying feedback are not described. OR Candidate provides limited or no feedback to inform student learning</td>
<td>Candidate provides vague explanation for how focus students will use feedback to complete current or future assignments.</td>
<td>Candidate describes how focus students will use feedback on their strengths and weaknesses to revise their current work, as needed.</td>
<td>Candidate describes how s/he will support focus students to use feedback on their strengths and weaknesses to deepen understandings and skills related to their current work.</td>
<td>Level 4 plus: Candidate guides focus students to generalize feedback beyond the current work sample.</td>
</tr>
</tbody>
</table>
## Rubric 14: Analyzing Students’ Language Use and Mathematics Learning

**How does the candidate analyze students’ use of language to develop content understanding?**

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate identifies language use that is superficially related or unrelated to the language demands (function, vocabulary and additional demands).</td>
<td>Candidate provides evidence that students use vocabulary associated with the language function.</td>
<td>Candidate explains and provides evidence of students’ use of the language function as well as vocabulary or additional language demand(s).</td>
<td>Candidate explains and provides evidence of students’ use of the language function, vocabulary, and additional language demand(s) in ways that develop content understandings.</td>
<td>Level 4 plus: Candidate explains and provides evidence of language use and content learning for students with varied needs.</td>
</tr>
</tbody>
</table>

**OR**

Candidate does not address students’ repeated misuse of vocabulary.

---

7 The selected language function is the verb identified in the Planning Commentary Prompt 4a (categorize, describe, interpret, etc.).

8 These are the additional language demands identified in the Planning Commentary Prompt 4c (vocabulary and/or symbols, plus either syntax or discourse).
**Rubric 15: Using Assessment to Inform Instruction**

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

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
</table>
| Next steps **do not follow** from the analysis.                         | Next steps **focus on repeating instruction, pacing, or classroom management issues.** | Next steps **propose general support that improves student learning related to**  
- **conceptual understanding,**  
- **procedural fluency,** **OR**  
- **reasoning/problem solving skills** | Next steps **provide targeted support to individuals or groups to improve their learning relative to**  
- **conceptual understanding,**  
- **procedural fluency,** **OR**  
- **reasoning/problem solving skills**  
Next steps are loosely connected with research and/or theory. | Next steps provide targeted support to individuals and groups to improve their learning relative to  
- **conceptual understanding,**  
- **procedural fluency**  
- **reasoning/problem solving skills**  
Next steps are justified with principles from research and/or theory. |
| OR                                                                     |                                                                         |                                                                        |                                                                        |                                                                        |
| Next steps are **not relevant to the standards and learning objectives** assessed. |                                                                         |                                                                        |                                                                        |                                                                        |
| OR                                                                     |                                                                         |                                                                        |                                                                        |                                                                        |
| Next steps are **not described in sufficient detail to understand them.** |                                                                         |                                                                        |                                                                        |                                                                        |
# Professional Responsibilities

Refer to the following table for an overview of your professional responsibilities in developing evidence for edTPA. If you are submitting artifacts and commentaries for official scoring, refer to [www.edTPA.com](http://www.edTPA.com), for complete and current information before beginning your work. Included here is important information and policies such as submission requirements and deadlines, registration agreements, attestations, permissions, and confidentiality. Whether or not you are submitting for official scoring, you should fulfill the professional responsibilities described below.

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protect confidentiality</td>
<td>To protect confidentiality, please remove your name and use pseudonyms or general references (e.g., “the district”) for your state, school, district, and cooperating teacher. Mask or remove all names on any typed or written material (e.g., commentaries, lesson plans, student work samples) that could identify individuals or institutions. During video recording, use students’ first names only. To ensure confidentiality of your students and yourself, do not share your video on any publicly accessible platforms or websites (YouTube, Facebook, etc.).</td>
</tr>
<tr>
<td>Acquire permissions</td>
<td>Before you record your classroom instruction, ensure that you have the appropriate permission from the parents/guardians of your students and from adults who appear in the video recording. Your program will provide you with procedures and necessary forms to obtain these permissions, according to agreements with the school or district in which you are student teaching or completing your internship. If your program does not provide the necessary forms, you may refer to the sample forms found on <a href="http://www.edTPA.com">www.edTPA.com</a>. The release forms are not to be submitted with your materials, but you should follow your campus policy for retaining them.</td>
</tr>
<tr>
<td>Cite sources</td>
<td>Provide citations for the source of all materials that you did not create (e.g., published texts, websites, and material from other educators). List all citations by lesson number at the end of the Planning Commentary.</td>
</tr>
<tr>
<td>Align instruction with state standards</td>
<td>As part of the assessment, you will document the alignment of your lesson plans with state-adopted academic content standards or Common Core State Standards that are the target of student learning. Refer to the education agency website for your state to obtain copies of relevant standards for this assessment.</td>
</tr>
</tbody>
</table>
| Follow the guidelines for candidate support at www.edTPA.com | Follow the guidelines for candidate support found at [www.edTPA.com](http://www.edTPA.com) as you develop your evidence for edTPA. Although you may seek and receive appropriate support from your university supervisors, cooperating/master teachers, university instructors, or peers during this process, the ultimate responsibility for completing this assessment lies with you. Therefore, **when you submit your completed work, you must be able to confirm your adherence with certain statements, such as the following:**  
  - I have primary responsibility for teaching the students/class during the learning segment profiled in this assessment.  
  - I have not previously taught this learning segment to the students/class.  
  - The video clips submitted show me teaching the students/class profiled in the evidence submitted.  
  - The student work included in the documentation is that of my students, completed during the learning segment documented in this assessment.  
  - I am sole author of the commentaries and other written responses to prompts and other requests for information in this assessment.  
  - Appropriate citations have been made for all materials in the assessment whose sources are from published text, the Internet, or other educators. |
Elementary Mathematics Context for Learning Information

Use the Context for Learning Information to supply information about your school/classroom context.

About the School Where You Are Teaching

1. In what type of school do you teach?
   - Urban:
   - Suburban:
   - Rural:

2. What grade levels are at your school site? (e.g., K–6)

3. List any special features of your school or classroom setting (e.g., charter, co-teaching, themed magnet, classroom aide, bilingual, team taught with a special education teacher) that will affect your teaching in this learning segment.

4. Describe any district, school, or cooperating teacher requirements or expectations that might affect your planning or delivery of instruction, such as required curricula, pacing plan, use of specific instructional strategies, or standardized tests.

About the Class Featured in This Assessment

1. How much time is devoted each day to mathematics instruction in your classroom?

2. Is there any ability grouping or tracking in mathematics? If so, please describe how it affects your class.

3. Identify any textbook or instructional program you primarily use for mathematics instruction. If a textbook, please provide the title, publisher, and date of publication.

4. List other resources (e.g., electronic whiteboard, manipulatives, online resources) you use for mathematics instruction in this class.
About the Students in the Class Featured in This Assessment

1. Grade level(s): _________________________________________

2. Number of
   - students in the class _____
   - males _____ females _____

3. Complete the chart below to summarize required or needed supports, accommodations or modifications for your students that will affect your instruction in this learning segment. As needed, consult with your cooperating teacher to complete the chart. Some rows have been completed in italics as examples. Use as many rows as you need.

<table>
<thead>
<tr>
<th>IEP/504 Plans: Classifications/Needs</th>
<th>Number of Students</th>
<th>Supports, Accommodations, Modifications, Pertinent IEP Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: Visual processing</td>
<td>2</td>
<td>Close monitoring, graph paper for 3 digit numbers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Learning Needs</th>
<th>Number of Students</th>
<th>Supports, Accommodations, Modifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: Struggling readers</td>
<td>5</td>
<td>Provide oral explanations for directions and simplified text for word problems</td>
</tr>
</tbody>
</table>

Consider the variety of learners in your class who may require different strategies/supports or accommodations/modifications to instruction or assessment.

- English language learners
- Gifted students needing greater support or challenge
- Students with Individualized Education Programs (IEPs) or 504 plans
- Struggling readers
- Underperforming students or those with gaps in academic knowledge
# Elementary Mathematics Evidence Chart

Your evidence must be submitted to the electronic portfolio management system used by your teacher preparation program. Your submission must conform to the artifact and commentary specifications for each task. This section provides instructions for all evidence types as well as a description of supported file types for evidence submission, number of files, response lengths, and other information regarding format specifications.

## Task 1: Artifacts and Commentary Specifications

<table>
<thead>
<tr>
<th>What to Submit</th>
<th>Supported File Types</th>
<th>Number of Files</th>
<th>Response Length</th>
<th>Additional Information</th>
</tr>
</thead>
</table>
| Part A: Context for Learning Information (template provided) | .doc; .docx; .odt; .pdf | 1               | No more than 3 pages, including prompts              | - Use Arial 11-point type.  
- Single space with 1" margins on all sides.                                                |
| Part B: Lesson Plans for Learning Segment | .doc; .docx; .odt; .pdf | 1               | No more than 4 pages per lesson                      | - Submit 3–5 lesson plans in 1 file.  
- Within the file, label each lesson plan (Lesson 1, Lesson 2, etc.).  
- All rationale or explanation for plans should be written in the Planning Commentary and removed from lesson plans. |
| Part C: Instructional Materials         | .doc; .docx; .odt; .pdf | 1               | No more than 5 pages of KEY instructional materials per lesson plan | - Submit materials in 1 file.  
- Within the file, label materials by corresponding lesson (Lesson 1 Instructional Materials, Lesson 2 Instructional Materials, etc.).  
- Order materials as they are used in the learning segment.                                    |
| Part D: Assessments                    | .doc; .docx; .odt; .pdf | 1               | N/A                                                   | - Submit assessments in 1 file.  
- Within the file, label assessments by corresponding lesson (Lesson 1 Assessments, Lesson 2 Assessments, etc.).  
- Order assessments as they are used in the learning segment.                                  |
| Part E: Planning Commentary (template provided) | .doc; .docx; .odt; .pdf | 1               | No more than 9 pages, including prompts              | - Use Arial 11-point type.  
- Single space with 1" margins on all sides.  
- Respond to prompts before teaching the learning segment.                                       |
## Task 2: Artifacts and Commentary Specifications

<table>
<thead>
<tr>
<th>What to Submit</th>
<th>Supported File Types</th>
<th>Number of Files</th>
<th>Response Length</th>
<th>Additional Information</th>
</tr>
</thead>
</table>
| Part A: Video Clips | flv, asf, qt, mov, mpg, mpeg, avi, wmv, mp4, m4v | 1 - 2 | No more than 15 minutes total running time | - Before you record your video, obtain permission from the parents/guardians of your students and from adults who appear on the video.  
- Refer to Task 2, What Do I Need to Do? for video clip content and requirements.  
- When naming each clip file, include the number of the lesson shown in the video clip. |
| Part B: Instruction Commentary (template provided) | .doc; .docx; .odt; .pdf | 1 - 1 | No more than 6 pages of commentary, including prompts If needed, no more than 2 pages of supporting documentation | - Use Arial 11-point type.  
- Single space with 1" margins on all sides.  
- Respond to prompts after teaching the learning segment.  

**IMPORTANT:**  
- Insert documentation at the end of the commentary file if  
  - graphics, texts, or images that you or the students are using are not clearly visible in the video  
  - portions of the video are inaudible  
- If submitting documentation, include the video clip number, lesson number, and explanatory text (e.g., “Clip 1, lesson 2, text from a whiteboard that is not visible in the video,” “Clip 2, lesson 4, transcription of a student response that is inaudible”).
## Task 3: Artifacts and Commentary Specifications

<table>
<thead>
<tr>
<th>What to Submit</th>
<th>Supported File Types</th>
<th>Number of Files</th>
<th>Response Length</th>
<th>Additional Information</th>
</tr>
</thead>
</table>
| **Part A: Student Work Samples** | .doc; .docx; .odt; .pdf        | 3               | 3               | Use correction fluid, tape, or a felt-tip marker to **mask or remove students' names, your name, and the name of the school before copying/scanning any work samples.**  
On each work sample, indicate the student number (Student 1 Work Sample, Student 2 Work Sample, or Student 3 Work Sample) and refer to them accordingly in the Assessment Commentary.  
If your students' writing is illegible, write a transcription directly on the work sample. |
| **Part B: Evidence of Feedback** | For written feedback not written on the work samples: .doc; .docx; .odt; .pdf  
For audio feedback: flv, asf, wmv, qt, mov, mpg, avi, mp3, wav, mp4, wma  
For video clips (feedback and/or language use): flv, asf, qt, mov, mpg, mpeg, avi, wmv, mp4, m4v | 0               | 4               | Document the location of your evidence of feedback in the Assessment Commentary.  
If feedback is not written on the student work samples or recorded on the video clips, submit only 1 file for each student—a document, video file, OR audio file—and indicate the student number (Student 1 Feedback, Student 2 Feedback, or Student 3 Feedback) in the corresponding feedback.  
When naming each feedback file, include the student number.  
If you submit feedback as a video or audio clip and your comments cannot be clearly heard, attach transcriptions of your comments (no more than 2 pages) to the end of the Assessment Commentary.  
For Academic Language – If you choose to submit a video clip of student language use, it should be no more than 5 minutes, with a time-stamp reference for the evidence of language use described in the Assessment Commentary. |

(Continued on next page)
## Task 3: Artifacts and Commentary Specifications (continued)

<table>
<thead>
<tr>
<th>What to Submit</th>
<th>Supported File Types</th>
<th>Number of Files</th>
<th>Response Length</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part C: Assessment Commentary (template provided)</td>
<td>.doc; .docx; .odt; .pdf</td>
<td>1</td>
<td>No more than 10 pages of commentary, including prompts</td>
<td>- Use Arial 11-point type.</td>
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<td>Plus</td>
<td>- Single space with 1” margins on all sides.</td>
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<td></td>
<td>- no more than 5 pages for the chosen assessment,</td>
<td><strong>IMPORTANT:</strong> Insert a copy of the chosen assessment, including directions/prompts</td>
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<td>- if necessary, no more than 2 pages of feedback</td>
<td>provided to students.</td>
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<td></td>
<td></td>
<td></td>
<td>transcriptions</td>
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<tr>
<td>Part D: Evaluation Criteria</td>
<td>.doc; .docx; .odt; .pdf</td>
<td>1</td>
<td>N/A</td>
<td>- Indicate the lesson number on the corresponding evaluation criteria</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Lesson 1 Evaluation Criteria, Lesson 2 Evaluation Criteria, etc.).</td>
</tr>
</tbody>
</table>
**Elementary Mathematics Glossary**

Source citations for glossary entries are provided as footnotes in this section.

**academic language**: Oral and written language used for academic purposes. Academic language is the means by which students develop and express content understandings. Academic language represents the language of the discipline that students need to learn and use to participate and engage in meaningful ways in the content area. There are **language demands** that teachers need to consider as they plan to support student learning of content. These **language demands** include **vocabulary, language functions, syntax, and discourse**.

- **discourse**: Discourse includes the structures of written and oral language, as well as how students talk, write and participate in knowledge construction in ways that are appropriate both to their development and to the discipline. 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 symbolic representations such as numbers, equations, and proofs (which can be translated into words), tables and graphs (which are shorthand language for summarizing complex sets of data), and narrative (e.g., explanations of problem solutions). If the function is to compare, then appropriate language forms could include Venn diagrams or pattern sentences like “The _____ is longer/larger/heavier than the ______.” If the function is to explain, then students might use sentence starters like “First, I…”, “Then I…” to structure the explanation, and use “Finally, I…” to signal the conclusion.

- **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**: The content and language focus of the learning task 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, **recording** multiple ways to solve problems, **justifying** conclusions, **evaluating** data and mathematical representations, **classifying** based on attributes, **explaining** how or why certain strategies work, **drawing conclusions** based on data, **representing** mathematical information, and so on.

- **language supports**: Strategies that are used to build students’ academic language within a learning task. Strategies involve both modeling the appropriate language for the students to use in a learning task as well as opportunities for guided practice and

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independent practice. Strategies include think pair share, choral response, word walls, modeling, graphic organizers, and so on.

- **syntax**: The set of conventions for organizing symbols, words, and phrases together into structures (e.g., sentences, graphs, tables).¹¹

- **vocabulary**: Includes 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); (2) general academic vocabulary used across disciplines (e.g., compare, analyze, evaluate); and (3) subject-specific words defined for use in the discipline.¹²

**aligned**: Consistently addressing the same/similar learning outcomes for students.

**artifacts**: Authentic work completed by you and your students, including lesson plans, copies of instructional and assessment materials, video clips of your teaching, and student work samples. Artifacts are submitted as part of your edTPA evidence.

**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.”¹³ 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. Formal assessments may include, for example, quizzes, homework assignments, journals, and projects.

**assets (knowledge of students)**:

- **personal**: Refers to specific background information that students bring to the learning environment. Students may bring interests, knowledge, everyday experiences, family backgrounds, and so on, that a teacher can draw upon to support learning.

- **cultural**: Refers to the cultural backgrounds and practices that students bring to the learning environment, such as traditions, languages, world views, literature, art, and so on, that a teacher can draw upon to support learning.

- **community**: Refers to common backgrounds and experiences that students bring from the community where they live, such as resources, local landmarks, community events and practices, and so on, that a teacher can draw upon to support learning.

**central focus**: A description of the important understandings and core concepts that you want students to develop within the learning segment. The central focus should go beyond a list of facts and skills, align with content standards and learning objectives, and address the subject-specific components in the learning segment. For example, the subject-specific components for elementary mathematics are conceptual understanding, procedural fluency,

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and mathematical reasoning and/or problem solving skills. A central focus for the elementary mathematics learning segment might be equivalent fractions or equivalencies. The learning segment would focus on conceptual understanding and the associated computational/procedural understandings and reasoning and/or problem solving skills.

**commentary:** Submitted as part of each task and, along with artifacts, make up your evidence. The commentaries should be written to explain the rationale behind your teaching decisions and to analyze and reflect on what you have learned about your teaching practice and your students’ learning.

**engaging students in learning:** Using instructional and motivational strategies that promote students’ active involvement in learning tasks that increase their knowledge, skills, and abilities related to specific learning objectives. Engagement in learning contrasts with student participation in learning tasks that are not well designed and/or implemented and do not increase student learning.

**evaluation criteria:** Performance indicators or dimensions that are used to assess evidence of student learning. They indicate the qualities by which levels of performance can be differentiated and that anchor judgments about the learner’s degree of success on an assessment. Evaluation criteria can be represented in various ways, such as a rubric, a point system for different levels of performance, or rules for awarding full versus partial credit. Evaluation criteria may examine correctness/accuracy, cognitive complexity, sophistication or elaboration of responses, or quality of explanations.

**evidence:** Consists of artifacts that document how you planned and implemented instruction AND commentaries that explain your plans and what is seen in the video recording(s) or examine what you learned about your teaching practice and your students’ learning. Evidence should demonstrate your ability to design lesson plans with instructional supports that deepen student learning, use knowledge of your students to inform instruction, foster a positive learning environment that promotes student learning, monitor and assess student progress toward learning objectives, and analyze your teaching effectiveness. Your evidence must be submitted electronically using the electronic portfolio management system used by your teacher preparation program.

**learning environment:** The designed physical and emotional context, established and maintained throughout the learning segment to support a positive and productive learning experience for students.

**learning objectives:** Student learning outcomes to be achieved by the end of the lesson or learning segment.

**learning segment:** A set of 3–5 lessons that build one upon another toward a central focus, with a clearly defined beginning and end.

**learning task:** Includes activities, discussions, or other modes of participation that engage students to develop, practice and apply skills and knowledge related to a specific learning goal. Learning tasks may be scaffolded to connect prior knowledge to new knowledge and often include formative assessment. A sample mathematical learning task for fourth graders working with multi-digit numbers could be: Collect the population from 4 neighboring states to compare with our own state. Identify the state with the highest and lowest populations and make a table showing the states’ populations in order from highest to lowest populations. Compare the populations of the states by writing statements using <, =, and >.
mathematical understandings: Mathematical competencies (conceptual understanding and procedural fluency) develop through instruction of mathematical topics. Mathematical reasoning provides opportunities for students to develop and express insights about the mathematical competencies that they are developing. Problem solving allows students to draw on the competencies that they are developing to engage in a task for which the solution is not known.

patterns of learning: Includes both quantitative and qualitative consistencies for different groups of students and individuals across the whole class. Quantitative patterns indicate the number of similar correct responses or errors across or within student assessments. Qualitative patterns include descriptions of understandings and/or misunderstandings of a mathematical skill or concept, partial understandings, and/or attempts at solution that underlie the quantitative patterns. For example, if the majority of students (quantitative) in a class ordered unit fractions from least to greatest as 1/2, 1/3, 1/4, 1/5, the students’ error shows that they believe that the smaller the denominator, the smaller the fraction, they have a mathematical misunderstanding related to the value of fractional parts (qualitative).

planned supports: Instructional strategies, learning tasks and materials, and other resources deliberately designed to facilitate student learning of the central focus.

prior academic learning and prerequisite skills: Includes students’ content knowledge and skills as well as academic experiences developed prior to the learning segment.

rapport: A close and harmonious relationship in which the people or groups understand each other’s feelings or ideas and communicate well with each other.

representations: Manipulatives, models, tools, charts, and/or graphics that are used to deepen students’ understanding of mathematics knowledge.

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.

rubrics: Subject-specific evaluation criteria used to score your performance on edTPA. These rubrics are included in the handbook following the directions for each task. The descriptors in the five-level rubrics address a wide range of performance, beginning with the knowledge and skills of a novice not ready to teach (Level 1) and extending to the advanced practices of a highly accomplished beginner (Level 5).

variety of learners: Students in your class who may require different strategies or support. These students include but are not limited to students with IEPs, English language learners, struggling readers, underperforming students or those with gaps in academic knowledge, and/or gifted students.