## SECTION IV—EVIDENCE FOR MEETING STANDARDS

**Assessment #4**
**Mathematics Teaching Performance Assessment**

a. Description of the Assessment

The Mathematics Teaching Performance Assessment is used to assess the teacher candidate's knowledge, skills and abilities for teaching secondary school. Teacher candidates are assessed by their college supervisor during Clinical Practice II (full-time student teaching) using this instrument following a series of observed lessons. College supervisors observe teaching candidates a total of 7 times throughout the semester. Supervisors' assessments are informed by parallel assessments completed by the cooperating teachers. This instrument is used at mid-semester to identify areas of improvement and at the end of student teaching for final evaluation.

b. Alignment of NCTM Standards and Indicators with this assessment

Since Clinical Practice II is the culminating experience of the Mathematics Secondary Education program, many indicators are assessed with this instrument:

| **Program Standard** | **Elements Addressed** |
|---|---|
| Standard 2: Mathematical Practices | 2a, 2b, 2d, 2e |
| Standard 3: Content Pedagogy | 3a, 3b, 3c, 3e, 3f |
| Standard 4: Mathematical Learning Environment | 4a, 4d, 4e |
| Standard 5: Impact on Student Learning | 5b, 5c |
| Standard 6: Professional Knowledge and Skills | 6b, 6c |
| Standard 7: Secondary Mathematics Field Experiences and Clinical Practice | 7c |

Please see the scoring guide in part f for a more detailed alignment.

c. Data Findings

The Mathematics Teaching Performance Assessment was revised in January, 2018 to better align to the 2012 NCTM CAEP Standards. In fall of 2018, we had only 5 candidates, so the data collected represents the spring of 2018 and spring of 2019 and demonstrates the performance of a total of 33 teacher candidates.

In spring of 2018, there were eighteen teacher candidates in Clinical Practice II. In all but one category, 100% of the teacher candidates scored Proficient or above. There was only one teacher candidate who scored below Proficient in the category of Problem Solving (2a). Other notable categories include Closure (3f) in which only 38.89% of the candidates scored at the Exceptional level, and Strategies and Differentiation (3c) and Professional Resources (6c), in which only 66.7% of the candidates scored at the Exceptional level. In every other category, over 75% of the candidates scored at the Exceptional level. It should be noted that this cohort was an exceptionally strong group of teacher candidates.

In spring of 2019, there were fifteen teacher candidates in Clinical Practice II. In many categories, 100% of the teacher candidates scored Proficient or above. In the categories that were exceptions to this, at most one candidate scored below Proficient, except in the categories of Lesson Reflections (6b) and Closure (3f), where there were 2 and 3 candidates scoring below Proficient, respectively. Again, Closure (3f), Strategies and Differentiation (3c), and Professional Resources (6c) were the categories with the lowest number of candidate scoring at the Exceptional level (40%, 33.33%, and 40%, respectively).

d. Data Interpretation

The data shows that candidates have met the NCTM indicators listed above since with the exception of two categories (Closure and Lesson Reflections), all but at most one candidate scored at least at the Proficient level. The data findings seem to point to areas where candidates are not as strong; that is, closing lessons effectively to encourage student reflection, incorporating a wide variety of strategies including differentiation, and integrating professional resources into their lessons. It is not too concerning since the large majority (100% in spring of 2018 and 80% in spring of 2019) are Proficient and above, but it is something to think about and focus on in the future.

e. Assessment tool

During Clinical Practice II, teacher candidates are observed by a college mathematics supervisor on seven occasions. Supervisors provide feedback to candidates on the observed lesson(s) after each observation using the Lesson Observation Rubric (see attachment – note that we do not collect data from this rubric), which is aligned with the Mathematics Teaching Performance Assessment. Using data from the completed Lesson Observation Rubrics, at midterm and at the end of the semester, supervisors complete the Mathematics Teaching Performance Assessment with input from the cooperating teacher.

# Mathematics Teaching Performance Assessment 2018

by Cathy Liebars

## Teaching Performance Assessment

## Mathematics Teaching Performance Assessment 2018

**Mathematics Teaching Performance Assessment**

**School of Education**

**The College of New Jersey**

**Clinical Practice II**

**Instructions:**

**Please select the performance level in each criteria below that best describes the Teacher Candidate's (TC) teaching performance to date. If you feel you cannot fairly rate the TC on any item, please select "not applicable."**

## Standards

| | |
|---|---|
| **NCTM-CAEP-2012.SEC.2.a** | Use problem solving to develop conceptual understanding, make sense of a wide variety of problems and persevere in solving them, apply and adapt a variety of strategies in solving problems confronted within the field of mathematics and other contexts, and formulate and test conjectures in order to frame generalizations. |
| **NCTM-CAEP-2012.SEC.2.b** | Reason abstractly, reflectively, and quantitatively with attention to units, constructing viable arguments and proofs, and critiquing the reasoning of others; represent and model generalizations using mathematics; recognize structure and express regularity in patterns of mathematical reasoning; use multiple representations to model and describe mathematics; and utilize appropriate mathematical vocabulary and symbols to communicate mathematical ideas to others. |
| **NCTM-CAEP-2012.SEC.2.d** | Organize mathematical thinking and use the language of mathematics to express ideas precisely, both orally and in writing to multiple audiences. |
| **NCTM-CAEP-2012.SEC.2.e** | Demonstrate the interconnectedness of mathematical |

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| | ideas and how they build on one another and recognize and apply mathematical connections among mathematical ideas and across various content areas and real-world contexts. |
| **NCTM-CAEP-2012.SEC.3.a** | Apply knowledge of curriculum standards for secondary mathematics and their relationship to student learning within and across mathematical domains. |
| **NCTM-CAEP-2012.SEC.3.b** | Analyze and consider research in planning for and leading students in rich mathematical learning experiences. |
| **NCTM-CAEP-2012.SEC.3.c** | Plan lessons and units that incorporate a variety of strategies, differentiated instruction for diverse populations, and mathematics-specific and instructional technologies in building all students conceptual understanding and procedural proficiency. |
| **NCTM-CAEP-2012.SEC.3.e** | Implement techniques related to student engagement and communication including selecting high quality tasks, guiding mathematical discussions, identifying key mathematical ideas, identifying and addressing student misconceptions, and employing a range of questioning strategies. |
| **NCTM-CAEP-2012.SEC.3.f** | Plan, select, implement, interpret, and use formative and summative assessments to inform instruction by reflecting on mathematical proficiencies essential for all students |
| **NCTM-CAEP-2012.SEC.4.a** | Exhibit knowledge of adolescent learning, development, and behavior and demonstrate a positive disposition toward mathematical processes and learning. |
| **NCTM-CAEP-2012.SEC.4.d** | Demonstrate equitable and ethical treatment of and high expectations for all students |
| **NCTM-CAEP-2012.SEC.4.e** | Apply mathematical content and pedagogical knowledge to select and use instructional tools such as manipulatives and physical models, drawings, virtual environments, spreadsheets, presentation tools, and mathematics-specific technologies (e.g., graphing tools, interactive geometry software, computer algebra systems, and statistical packages); and make sound decisions about when such tools enhance teaching and learning, recognizing both the insights to be gained and possible limitations of such tools. |
| **NCTM-CAEP-2012.SEC.5.b** | Engage students in developmentally appropriate mathematical activities and investigations that require active engagement and include mathematics-specific technology in building new knowledge. |
| **NCTM-CAEP-2012.SEC.5.c** | Collect, organize, analyze, and reflect on diagnostic, formative, and summative assessment evidence and determine the extent to which students mathematical proficiencies have increased as a result of their instruction. |

**NCTM-CAEP-2012.SEC.6.b** Engage in continuous and collaborative learning that draws upon research in mathematics education to inform practice; enhance learning opportunities for all students mathematical knowledge development; involve colleagues, other school professionals, families, and various stakeholders; and advance their development as a reflective practitioner.

**NCTM-CAEP-2012.SEC.6.c** Utilize resources from professional mathematics education organizations such as print, digital, and virtual resources/collections.

**NCTM-CAEP-2012.SEC.7.c** Develop knowledge, skills, and professional behaviors across both middle and high school settings; examine the nature of mathematics, how mathematics should be taught, and how students learn mathematics; and observe and analyze a range of approaches to mathematics teaching and learning, focusing on tasks, discourse, environment, and assessment.

## Mathematics Teaching Performance Assessment

| | **Exceptional** (4.000 pts) | **Proficient** (3.000 pts) | **Developing** (2.000 pts) | **Needs Improvement** (1.000 pt) | **NA** (0.000 pt) |
|---|---|---|---|---|---|
| **Lesson Reflections** NCTM-CAEP-2012.SEC.6.b | TC consistently seeks feedback from cooperating teacher(s) and supervisor(s), and initiates and engages in discussion and reflection that draws upon research in mathematics education in order to inform their practice and advance their development as a reflective practitioner. | TC frequently seeks feedback from cooperating teacher(s) and supervisor(s), and engages in discussion and reflection that draws upon research in mathematics education in order to inform their practice and advance their development as a reflective practitioner most of the time. | TC sometimes seeks feedback from cooperating teacher(s) and supervisor(s), and engages in discussion and reflection when asked to do so. | TC rarely seeks feedback, is not collaborative, and does not seek to advance their development as a reflective practitioner. | |
| **Problem solving** NCTM-CAEP-2012.SEC.2.a | TC consistently provides opportunities for students to solve a wide variety of problems within the field of mathematics and other contexts, and helps students to persevere, and to apply and adapt a variety of | TC provides many opportunities for students to solve problems within the field of mathematics or other contexts, and helps students to persevere, and to apply and adapt a variety of strategies when solving them. | TC provides some opportunities for students to solve problems within the field of mathematics or other contexts. | TC rarely provides problem solving opportunities for students. | |

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| | strategies when solving them. | | | | |
| **Development of Conceptual Understanding** NCTM-CAEP-2012.SEC.2.a | TC consistently teaches through problem solving; that is, uses problem solving to help students build new mathematical knowledge and develop conceptual understanding, and helps students to develop and test conjectures in order to frame generalizations. | TC teaches through problem solving most of the time; that is, uses problem solving to help students build new mathematical knowledge and develop conceptual understanding, and helps students to develop and test conjectures in order to frame generalizations. | TC sometimes teaches through problem solving; that is, uses problem solving to help students build new mathematical knowledge and develop conceptual understanding, and helps students to develop and test conjectures in order to frame generalizations.. | TC rarely teaches through problem solving. | |
| **Reasoning and Proof** NCTM-CAEP-2012.SEC.2.b | Opportunities for student engagement in reasoning (abstract, quantitative, and reflective) with attention to units, as well as construction of viable arguments and proofs, and critique of others' reasoning are integrated throughout the lessons. | Opportunities for student engagement in reasoning (abstract, quantitative, and reflective) with attention to units, as well as construction of viable arguments and proofs, and critique of others' reasoning are explicitly present at some point in the lessons. | Opportunities for student engagement in reasoning are implicit in the lessons or mostly guided by the TC. | TC provides minimal opportunity for student engagement in reasoning. | |
| **Reasoning and Proof: part 2** NCTM-CAEP-2012.SEC.2.b | Discussions, activities, and tasks guide students throughout the lessons to represent and model generalizations using mathematics, to recognize structure, and to express regularity in patterns of mathematical reasoning. | Discussions, activities, or tasks explicitly guide students at some point during the lessons to represent and model generalizations using mathematics, to recognize structure, and to express regularity in patterns of mathematical reasoning. | Some discussions, activities, or tasks guide students to represent and model generalizations using mathematics, to recognize structure, or to express regularity in patterns of mathematical reasoning. | Discussions, activities, or tasks minimally guide students to represent and model generalizations using mathematics, to recognize structure, or to express regularity in patterns of mathematical reasoning. | |
| **Communicatio** NCTM-CAEP-2012.SEC.2.b | TC consistently uses appropriate mathematical vocabulary and symbols to communicate mathematical ideas, uses multiple | TC uses appropriate mathematical vocabulary and symbols to communicate mathematical ideas, uses some representation to | TC uses appropriate mathematics vocabulary, symbols, and representation, but may not direct student attention to vocabulary, | TC uses appropriate mathematics vocabulary, symbols, and representations inconsistently or ineffectively. Student | |

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| | representations to model and describe mathematics, and implements strategies to help students do the same throughout the lessons. | model and describe mathematics, and implements strategies to help students do the same. | symbol, and representation meaning consistently or effectively. Student communication of mathematical ideas and symbols to others and use of multiple representations is sporadic. | communication of mathematical ideas and symbols to others and use of multiple representations is minimal. | |
| **Content precision** NCTM-CAEP-2012.SEC.2.d | TC consistently uses the language of mathematics to express ideas precisely, and communicates mathematical thinking coherently and clearly. | TC uses the language of mathematics to express ideas precisely, and communicates mathematical thinking coherently and clearly most of the time. | TC mostly uses the language of mathematics to express ideas precisely, but does not always communicate mathematical thinking coherently and clearly. | TC does not use the language of mathematics to express ideas precisely, and does not communicate mathematical thinking coherently and clearly. | |
| **Making Connections** NCTM-CAEP-2012.SEC.2.e | TC consistently demonstrates the interconnectedness of mathematical ideas and how they build on one another, and recognizes and uses connections among mathematical ideas and across various content areas and real-world contexts. | TC often demonstrates the interconnectedness of mathematical ideas and how they build on one another, and recognizes and uses connections among mathematical ideas and across various content areas or real-world contexts. | TC sometimes demonstrates the interconnectedness of mathematical ideas and how they build on one another, or sometimes makes connections to real-world contexts. | Connections among mathematical ideas or real-world contexts are minimal. | |
| **Lesson objectives** NCTM-CAEP-2012.SEC.3.a | Lessons address appropriate learning goals that are aligned to the Common Core Mathematics Standards and Practices. Objectives are clear, measurable, performance-based, and relate to important concepts and/or skills. | Lessons address appropriate learning goals that are aligned to the Common Core Mathematics Standards and Practices. Objectives are mostly clear, measurable, and performance-based. | Most lessons address appropriate learning goals that are aligned to the Common Core Mathematics Standards and Practices. Objectives may at times be unclear, or may not be measurable or performance-based. | Lessons do not always address appropriate learning goals or are not aligned to the Common Core Mathematics Standards and Practices. Objectives are often unclear, and may not be measurable or performance-based. | |
| **Strategies and Differentiation** NCTM-CAEP-2012.SEC.3.c | TC has explicitly and consistently incorporated a wide variety of mathematics curricula and strategies, including | TC has incorporated mathematics curricula and strategies, including differentiated instruction for | TC has attempted to incorporate some mathematics curricula and strategies, including differentiated | The strategies and differentiated instruction for diverse populations is minimal, and chosen strategies do not build | |

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| | differentiated instruction for diverse populations, in order to build all students' conceptual understanding and procedural fluency. | diverse populations, in order to build students' conceptual understanding and procedural fluency. | instruction for diverse populations, but it is not always clear how it will build all students' conceptual understanding and procedural fluency. | conceptual understanding or procedural fluency. | |
| **Technology** NCTM-CAEP-2012.SEC.3.c | TC has consistently incorporated mathematics-specific and instructional technologies where appropriate in order to build all students' conceptual understanding and procedural fluency. | TC has incorporated mathematics-specific and instructional technologies where appropriate in order to build students' conceptual understanding and procedural fluency. | TC has attempted to incorporate some mathematics-specific and instructional technologies, but it is not always clear how it will build all students' conceptual understanding and procedural fluency. | Use of mathematics-specific and instructional technologies is minimal and chosen technology does not build conceptual understanding or procedural fluency. | |
| **Student engagement** NCTM-CAEP-2012.SEC.3.e | Lessons consistently engage students in meaningful work by the inclusion of high quality tasks. | Most lessons engage students in meaningful work by the inclusion of high quality tasks. | Tasks used are not always high quality or do not always engage students. | Most lessons do not include high quality tasks or fail to engage students. | |
| **Student misconception** NCTM-CAEP-2012.SEC.3.e | TC consistently identifies the key mathematical ideas and student misconceptions and includes plans to address them. | TC identifies the key mathematical ideas and student misconceptions and includes plans to address them, but they may not always successfully be implemented. | TC identifies the key mathematical ideas and student misconceptions. | TC may identify the key mathematical ideas or student misconceptions, but does not address them. | |
| **Questioning** NCTM-CAEP-2012.SEC.3.e | TC consistently uses explicit strategies to include all students in mathematical discussions. Questioning strategies are explicitly planned to guide students to higher order thinking about key mathematical ideas. | TC uses strategies to include all students in mathematical discussions. Sometimes uses questioning strategies to guide students to higher order thinking about key mathematical ideas. | TC uses strategies that include some students in mathematical discussions. | Mathematical discussions are mostly teacher-centered. | |
| **Closure** NCTM-CAEP-2012.SEC.3.f | Consistently closes lessons effectively to encourage student reflection and uses multiple strategies, | Closes lessons effectively to encourage student reflection, sometimes using multiple strategies, | Attempts to close lessons to encourage student reflection or assess student learning. | Does not encourage student reflection or assess student learning at end of lessons. | |

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| | including listening to and understanding the ways students think about mathematics, to assess student learning and mathematical proficiencies that are essential for all students. | including listening to and understanding the ways students think about mathematics, to assess student learning and mathematical proficiencies that are essential for all students. | | | |
| **Assessment** NCTM-CAEP-2012.SEC.3.f | TC consistently plans, implements, and interprets a variety of formative and summative assessments and uses the data to inform instruction. | TC plans, implements, and interprets formative and summative assessments and uses the data to inform instruction most of the time. | TC plans and implements both formative and summative assessments. | TC does not include both formative and summative assessments in lessons. | |
| **Teacher Disposition** NCTM-CAEP-2012.SEC.4.a | TC consistently has a confident teaching presence. Exhibits knowledge of adolescent learning, development, and behavior and consistently demonstrates a positive disposition toward mathematical processes and learning. | TC has a confident teaching presence most of the time. Exhibits knowledge of adolescent learning, development, and behavior and demonstrates a positive disposition toward mathematical processes and learning. | TC is not always confident, but demonstrates a positive disposition toward mathematical processes and learning. | TC does not display a confident teaching presence and does not demonstrate a positive disposition toward mathematical processes and learning. | |
| **Equity** NCTM-CAEP-2012.SEC.4.d | Pedagogical and classroom management strategies consistently demonstrate equitable treatment of students. High expectations are held and instruction challenges all learners. | Pedagogical and classroom management strategies demonstrate equitable treatment of students. High expectations are held and instruction challenges most learners. | Pedagogical and classroom management strategies demonstrate equitable treatment of students. Instruction does not challenge all learners. | Pedagogical and classroom management strategies do not demonstrate equitable treatment of students. It is not clear that high expectations are held for all students. | |
| **Instructional tools** NCTM-CAEP-2012.SEC.4.e | TC consistently selects and uses appropriate instructional tools such as manipulatives, drawings, physical models, virtual environments, spreadsheets, presentation tools, and mathematics- | TC selects and uses appropriate instructional tools such as manipulatives, drawings, physical models, virtual environments, spreadsheets, presentation tools, and mathematics-specific | TC sometimes selects and uses appropriate instructional tools such as manipulatives, drawings, physical models, virtual environments, spreadsheets, presentation tools, and mathematics- | Instructional tools are minimally evident in the lessons. Multiple tools that were not chosen would likely have enhanced the learning opportunities. | |

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| | specific technologies. All tools that were chosen enhance the teaching and learning of the mathematics content, and nothing would be clearly enhanced by the inclusion of other tools. The limitations of chosen tools are often explicitly discussed, including alternate tools to address those limitations. | technologies. All tools that were chosen enhance the teaching and learning of the mathematics content, but sometimes a lesson would be clearly enhanced by the inclusion of other tools. The limitations of chosen tools are sometimes discussed. | specific technologies. Most tools that were chosen enhance the teaching and learning of the mathematics content, but most times the lesson would be clearly enhanced by the inclusion of other tools. | | |
| **Active engagement** NCTM-CAEP-2012.SEC.5.b | TC incorporates developmentally appropriate mathematical activities and investigations that require active engagement and include mathematics-specific technology where appropriate in building new knowledge throughout their lessons. | TC incorporates developmentally appropriate mathematical activities and investigations that require active engagement and include mathematics-specific technology where appropriate in building new knowledge in their lessons, but sometimes other activities could enhance lessons. | TC incorporates developmentally appropriate mathematical activities and investigations, but they do not always require active engagement or build new knowledge. | Activities and investigations are developmentally inappropriate. | |
| **Reflection on assessment data** NCTM-CAEP-2012.SEC.5.c | TC consistently reflects on assessment evidence to determine the extent to which students' mathematical proficiencies have increased as a result of their instruction. | TC reflects on assessment evidence to determine the extent to which students' mathematical proficiencies have increased as a result of their instruction most of the time. | TC does not always reflect on assessment evidence to determine the extent to which students' mathematical proficiencies have increased as a result of their instruction. | TC rarely reflects on assessment evidence. | |
| **Professional resources** NCTM-CAEP-2012.SEC.6.c | Resources from professional mathematics education organizations are explicitly integrated throughout the lessons. | Resources from professional mathematics education organizations are incorporated in most lessons. | Connections to resources from professional mathematics education organizations are vague or implicit. | Resources from professional mathematics education organizations are not integrated in lessons. | |
| **Overall performance** NCTM-CAEP-2012.SEC.7.c | Candidate has demonstrated exemplary knowledge, skills, | Candidate has demonstrated proficient knowledge, skills, | Candidate has demonstrated developing knowledge, skills, | Candidate has demonstrated limited knowledge, skills, and | |

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| | and professional behaviors by the end of Clinical Practice II. Candidate thoroughly and thoughtfully examined the nature of mathematics, how mathematics should be taught, how students learn mathematics, and observed and analyzed a range of approaches to mathematics teaching and learning (e.g., tasks, discourse, environment, and assessment). | and professional behaviors by the end of Clinical Practice II. Candidate examined the nature of mathematics, how mathematics should be taught, how students learn mathematics, and observed and analyzed a range of approaches to mathematics teaching and learning (e.g., tasks, discourse, environment, and assessment). | and professional behaviors by the end of Clinical Practice II. Candidate did not fully examine the nature of mathematics, how mathematics should be taught, how students learn mathematics, or observe and analyze a range of approaches to mathematics teaching and learning (e.g., tasks, discourse, environment, and assessment). | professional behaviors by the end of Clinical Practice II. Candidate minimally examined the nature of mathematics, how mathematics should be taught, how students learn mathematics, and observed and analyzed a limited range of approaches to mathematics teaching and learning (e.g., tasks, discourse, environment, and assessment). | |

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## My Reports - Assessment Report

General Information

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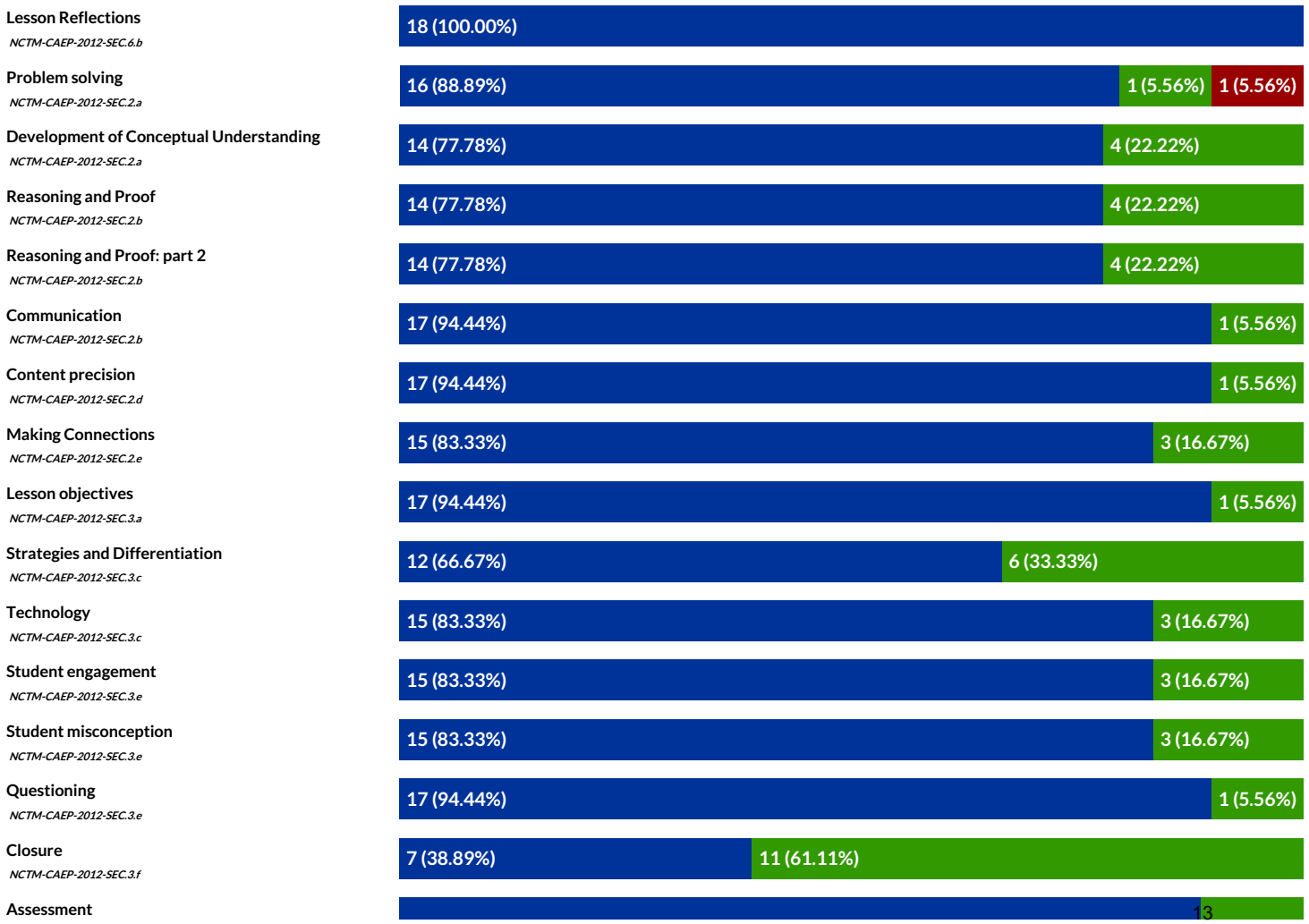
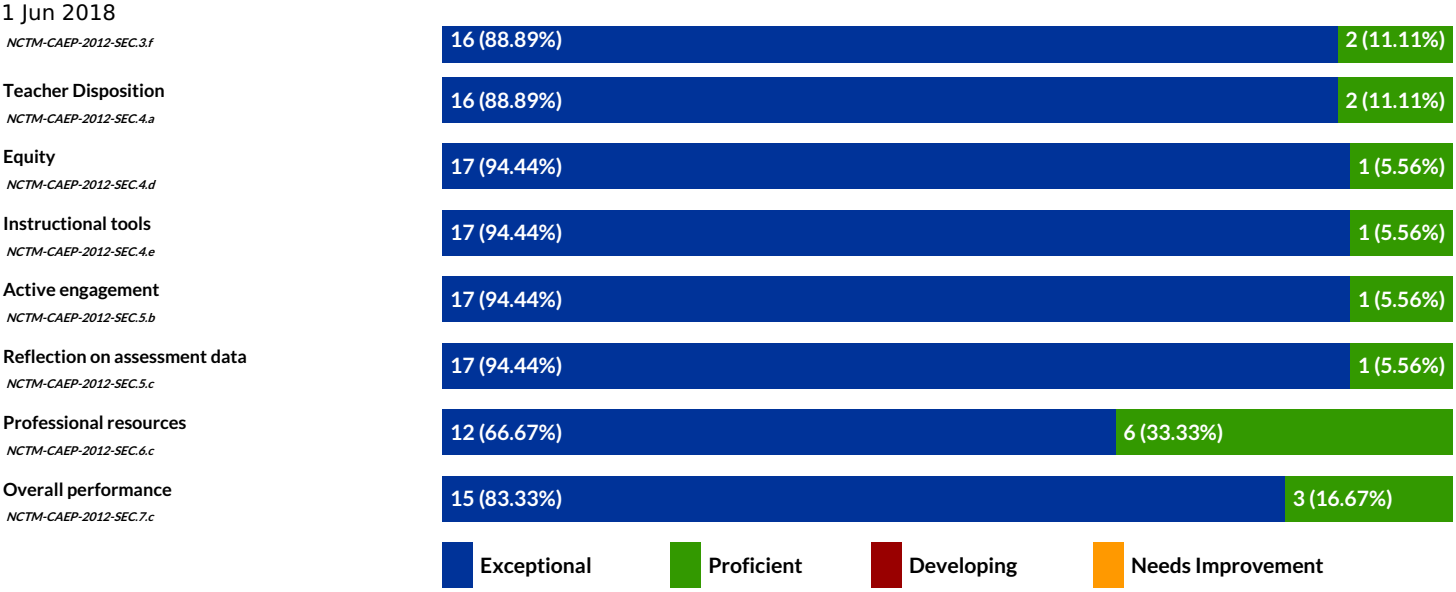
|---|---|
| **Title** | Spring 2018 Teacher Performance Assessment data |
| **Institution** | NJ: The College of New Jersey |
| **Course Section** | 2018 Spring - MTT490 - 1<br>2018 Spring - MTT490 - 2<br>2018 Spring - MTT490 - 3<br>2018 Spring - MTT490 - 4<br>2018 Spring - MTT490 - 5<br>2018 Spring - MTT490 - 6<br>2018 Spring - MTT490 - 7<br>2018 Spring - MTT490 - 8 |
| **Assessment Rubric** | Mathematics Teaching Performance Assessment 2018 - Mathematics Teaching Performance Assessment (COE Administrator) |
| **Assessment Type** | Summative |
| **Scoring Type** | Final |
| **Date Range** | From April 20, 2018 to June 15, 2018 |
| **Inter-Rater Summary** | Y |

## Rubric: Mathematics Teaching Performance Assessment

| | Exceptional *(4 pts)* | Proficient *(3 pts)* | Developing *(2 pts)* | Needs Improvement *(1 pts)* | *Mean* | *Mode* | *Stdev* |
|---|---|---|---|---|---|---|---|
| Lesson Reflections | 18 | 0 | 0 | 0 | 4.000 | 4.000 | 0.000 |
| Problem solving | 16 | 1 | 1 | 0 | 3.833 | 4.000 | 0.500 |
| Development of Conceptual Understanding | 14 | 4 | 0 | 0 | 3.778 | 4.000 | 0.416 |
| Reasoning and Proof | 14 | 4 | 0 | 0 | 3.778 | 4.000 | 0.416 |
| Reasoning and Proof: part 2 | 14 | 4 | 0 | 0 | 3.778 | 4.000 | 0.416 |
| Communication | 17 | 1 | 0 | 0 | 3.944 | 4.000 | 0.229 |
| Content precision | 17 | 1 | 0 | 0 | 3.944 | 4.000 | 0.229 |
| Making Connections | 15 | 3 | 0 | 0 | 3.833 | 4.000 | 0.373 |
| Lesson objectives | 17 | 1 | 0 | 0 | 3.944 | 4.000 | 0.229 |
| Strategies and Differentiation | 12 | 6 | 0 | 0 | 3.667 | 4.000 | 0.471 |
| Technology | 15 | 3 | 0 | 0 | 3.833 | 4.000 | 0.373 |
| Student engagement | 15 | 3 | 0 | 0 | 3.833 | 4.000 | 0.373 |
| Student misconception | 15 | 3 | 0 | 0 | 3.833 | 4.000 | 0.373 |
| Questioning | 17 | 1 | 0 | 0 | 3.944 | 4.000 | 0.229 |
| Closure | 7 | 11 | 0 | 0 | 3.389 | 3.000 | 0.487 |
| Assessment | 16 | 2 | 0 | 0 | 3.889 | 4.000 | 0.314 |
| Teacher Disposition | 16 | 2 | 0 | 0 | 3.889 | 4.000 | 0.314 |
| Equity | 17 | 1 | 0 | 0 | 3.944 | 4.000 | 0.229 |
| Instructional tools | 17 | 1 | 0 | 0 | 3.944 | 4.000 | 0.229 |
| Active engagement | 17 | 1 | 0 | 0 | 3.944 | 4.000 | 0.229 |
| Reflection on assessment data | 17 | 1 | 0 | 0 | 3.944 | 4.000 | 0.229 |
| Professional resources | 12 | 6 | 0 | 0 | 3.667 | 4.000 | 0.471 |
| Overall performance | 15 | 3 | 0 | 0 | 3.833 | 4.000 | 0.373 |






## Inter-Rater Summary

| | Amtzis, Alan | DiStasi, Joanna | Fesko, Marilyn | Liebars, Cathy | Maskell, Jeanne | Niemis, Stephanie | Snider, Rachel | Sweeney, Ruth | *Mean* | *Stdev* |
|---|---|---|---|---|---|---|---|---|---|---|
| Lesson Reflections | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 0.000 |
| Problem solving | 4.000 | 4.000 | 4.000 | 2.000 | 4.000 | 4.000 | 4.000 | 3.667 | 3.708 | 0.700 |
| Development of Conceptual Understanding | 4.000 | 4.000 | 4.000 | 3.000 | 3.500 | 4.000 | 4.000 | 3.333 | 3.729 | 0.398 |
| Reasoning and Proof | 4.000 | 4.000 | 4.000 | 3.000 | 3.500 | 4.000 | 4.000 | 3.333 | 3.729 | 0.398 |
| Reasoning and Proof: part 2 | 3.000 | 4.000 | 4.000 | 3.000 | 3.500 | 4.000 | 4.000 | 3.667 | 3.646 | 0.440 |
| Communication | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 3.667 | 3.958 | 0.118 |
| Content precision | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 3.667 | 3.958 | 0.118 |
| Making Connections | 3.000 | 4.000 | 4.000 | 3.000 | 4.000 | 4.000 | 4.000 | 3.667 | 3.708 | 0.452 |
| Lesson objectives | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 3.667 | 3.958 | 0.118 |
| Strategies and Differentiation | 3.000 | 4.000 | 4.000 | 4.000 | 4.000 | 3.000 | 4.000 | 3.333 | 3.667 | 0.471 |
| Technology | 4.000 | 3.667 | 4.000 | 4.000 | 4.000 | 4.000 | 3.000 | 3.667 | 3.792 | 0.354 |
| Student engagement | 4.000 | 4.000 | 4.000 | 3.000 | 3.500 | 4.000 | 4.000 | 3.667 | 3.771 | 0.367 |
| Student misconception | 4.000 | 4.000 | 4.000 | 4.000 | 3.500 | 4.000 | 4.000 | 3.333 | 3.854 | 0.274 |
| Questioning | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 3.667 | 3.958 | 0.118 |
| Closure | 3.000 | 3.333 | 3.750 | 3.000 | 3.000 | 4.000 | 3.000 | 3.000 | 3.260 | 0.402 |
| Assessment | 3.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 3.667 | 3.833 | 0.356 |
| Teacher Disposition | 3.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 3.667 | 3.833 | 0.356 |
| Equity | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 3.667 | 3.958 | 0.118 |
| Instructional tools | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 3.667 | 3.958 | 0.118 |
| Active engagement | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 3.667 | 3.958 | 0.118 |
| Reflection on assessment data | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 3.667 | 3.958 | 0.118 |
| Professional resources | 3.000 | 4.000 | 4.000 | 3.000 | 3.000 | 4.000 | 4.000 | 3.333 | 3.542 | 0.502 |
| Overall performance | 3.000 | 4.000 | 4.000 | 4.000 | 4.000 | 3.667 | 4.000 | 3.667 | 3.792 | 0.354 |

This report is created by Cathy S Liebars at 2019-07-02 12:31:18

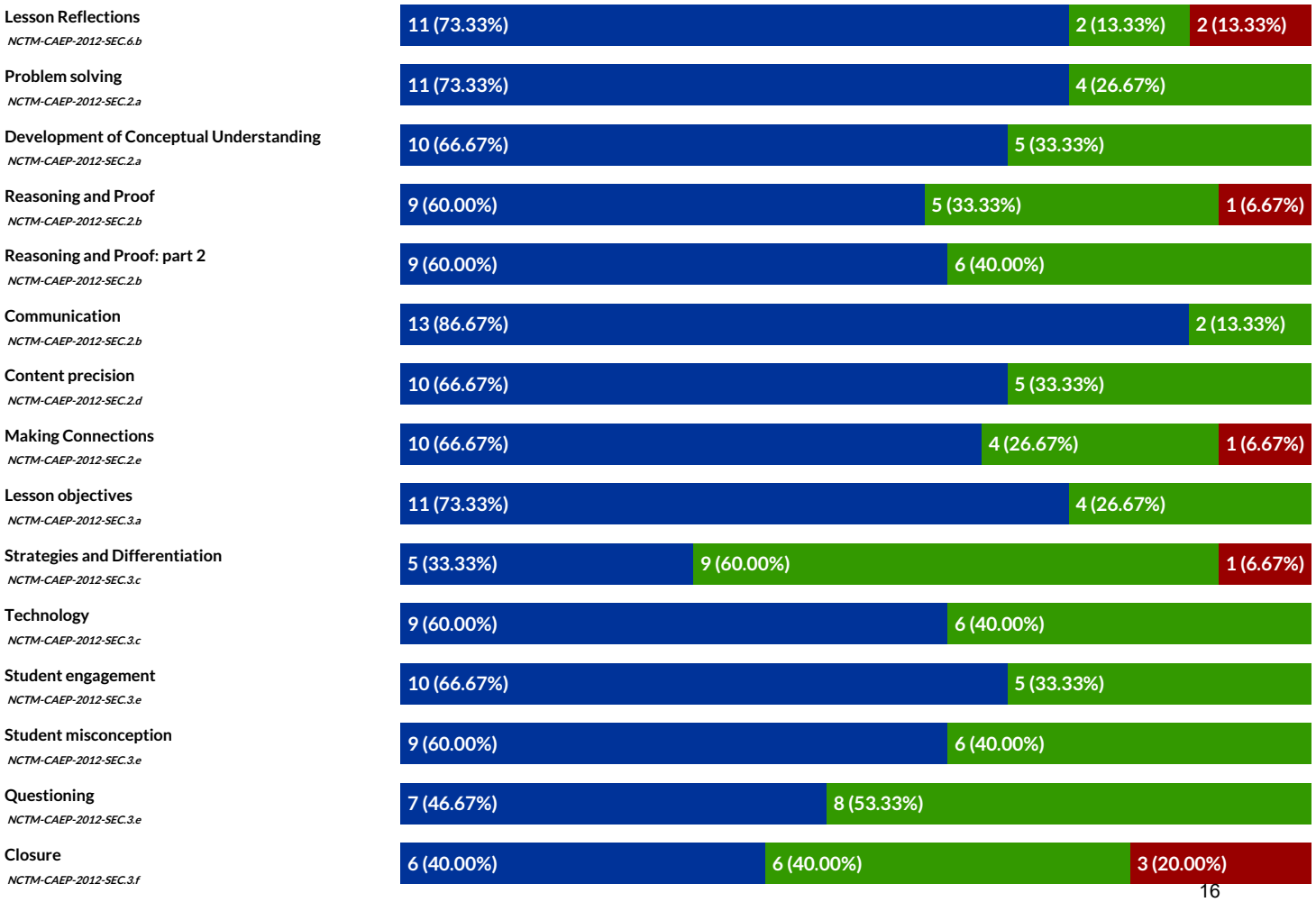
# My Reports - Assessment Report

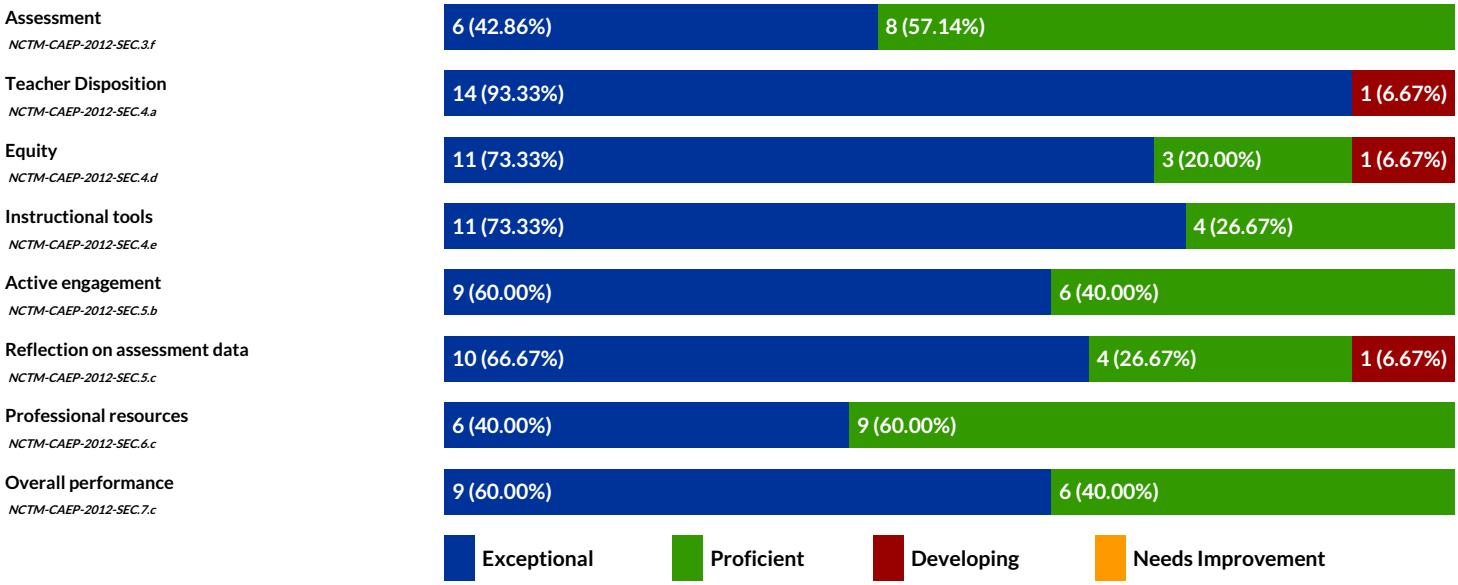
General Information

| | |
|---|---|
| **Title** | Teaching Performance assessment Spring 2019 |
| **Institution** | NJ: The College of New Jersey |
| **Course Section** | 2019 Spring - MTT490 - 1<br>2019 Spring - MTT490 - 2<br>2019 Spring - MTT490 - 3<br>2019 Spring - MTT490 - 4<br>2019 Spring - MTT490 - 5<br>2019 Spring - MTT490 - 6<br>2019 Spring - MTT490 - 7<br>2019 Spring - MTT490 - 8 |
| **Assessment Rubric** | Mathematics Teaching Performance Assessment 2018 - Mathematics Teaching Performance Assessment (COE Administrator) |
| **Assessment Type** | Summative |
| **Scoring Type** | Final |
| **Inter-Rater Summary** | Y |

## Rubric: Mathematics Teaching Performance Assessment

| | Exceptional *(4 pts)* | Exceptional *(4 pts)* | Proficient *(3 pts)* | Proficient *(3 pts)* | Developing *(2 pts)* | Developing *(2 pts)* | Needs Improvement *(1 pts)* | Needs Improvement *(1 pts)* | *n* | *Mean* | *Mode* | *Stdev* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lesson Reflections | 11 | 73.33% | 2 | 13.33% | 2 | 13.33% | 0 | 0.00% | 15 | 3.600 | 4.000 | 0.712 |
| Problem solving | 11 | 73.33% | 4 | 26.67% | 0 | 0.00% | 0 | 0.00% | 15 | 3.733 | 4.000 | 0.442 |
| Development of Conceptual Understanding | 10 | 66.67% | 5 | 33.33% | 0 | 0.00% | 0 | 0.00% | 15 | 3.667 | 4.000 | 0.471 |
| Reasoning and Proof | 9 | 60.00% | 5 | 33.33% | 1 | 6.67% | 0 | 0.00% | 15 | 3.533 | 4.000 | 0.618 |
| Reasoning and Proof: part 2 | 9 | 60.00% | 6 | 40.00% | 0 | 0.00% | 0 | 0.00% | 15 | 3.600 | 4.000 | 0.490 |
| Communication | 13 | 86.67% | 2 | 13.33% | 0 | 0.00% | 0 | 0.00% | 15 | 3.867 | 4.000 | 0.340 |
| Content precision | 10 | 66.67% | 5 | 33.33% | 0 | 0.00% | 0 | 0.00% | 15 | 3.667 | 4.000 | 0.471 |
| Making Connections | 10 | 66.67% | 4 | 26.67% | 1 | 6.67% | 0 | 0.00% | 15 | 3.600 | 4.000 | 0.611 |
| Lesson objectives | 11 | 73.33% | 4 | 26.67% | 0 | 0.00% | 0 | 0.00% | 15 | 3.733 | 4.000 | 0.442 |
| Strategies and Differentiation | 5 | 33.33% | 9 | 60.00% | 1 | 6.67% | 0 | 0.00% | 15 | 3.267 | 3.000 | 0.573 |
| Technology | 9 | 60.00% | 6 | 40.00% | 0 | 0.00% | 0 | 0.00% | 15 | 3.600 | 4.000 | 0.490 |
| Student engagement | 10 | 66.67% | 5 | 33.33% | 0 | 0.00% | 0 | 0.00% | 15 | 3.667 | 4.000 | 0.471 |
| Student misconception | 9 | 60.00% | 6 | 40.00% | 0 | 0.00% | 0 | 0.00% | 15 | 3.600 | 4.000 | 0.490 |
| Questioning | 7 | 46.67% | 8 | 53.33% | 0 | 0.00% | 0 | 0.00% | 15 | 3.467 | 3.000 | 0.499 |
| Closure | 6 | 40.00% | 6 | 40.00% | 3 | 20.00% | 0 | 0.00% | 15 | 3.200 | 4.000 | 0.748 |
| Assessment | 6 | 42.86% | 8 | 57.14% | 0 | 0.00% | 0 | 0.00% | 14 | 3.429 | 3.000 | 0.495 |
| Teacher Disposition | 14 | 93.33% | 0 | 0.00% | 1 | 6.67% | 0 | 0.00% | 15 | 3.867 | 4.000 | 0.499 |
| Equity | 11 | 73.33% | 3 | 20.00% | 1 | 6.67% | 0 | 0.00% | 15 | 3.667 | 4.000 | 0.596 |
| Instructional tools | 11 | 73.33% | 4 | 26.67% | 0 | 0.00% | 0 | 0.00% | 15 | 3.733 | 4.000 | 0.442 |
| Active engagement | 9 | 60.00% | 6 | 40.00% | 0 | 0.00% | 0 | 0.00% | 15 | 3.600 | 4.000 | 0.490 |
| Reflection on assessment data | 10 | 66.67% | 4 | 26.67% | 1 | 6.67% | 0 | 0.00% | 15 | 3.600 | 4.000 | 0.611 |
| Professional resources | 6 | 40.00% | 9 | 60.00% | 0 | 0.00% | 0 | 0.00% | 15 | 3.400 | 3.000 | 0.490 |
| Overall performance | 9 | 60.00% | 6 | 40.00% | 0 | 0.00% | 0 | 0.00% | 15 | 3.600 | 4.000 | 0.490 |






## Inter-Rater Summary

| | Fesko, Marilyn | Liebars, Cathy | Maskell, Jeanne | Niemis, Stephanie | Snider, Rachel | Sweeney, Ruth | VanderSandt, Su | *Mean* | *Stdev* |
|---|---|---|---|---|---|---|---|---|---|
| Lesson Reflections | 3.667 | 2.000 | 4.000 | 4.000 | 3.500 | 4.000 | 2.000 | 3.310 | 0.915 |
| Problem solving | 4.000 | 3.000 | 4.000 | 4.000 | 3.000 | 4.000 | 3.000 | 3.571 | 0.535 |
| Development of Conceptual Understanding | 4.000 | 3.000 | 4.000 | 4.000 | 3.000 | 3.500 | 3.000 | 3.500 | 0.500 |
| Reasoning and Proof | 3.667 | 2.000 | 3.667 | 4.000 | 3.000 | 4.000 | 3.000 | 3.333 | 0.720 |
| Reasoning and Proof: part 2 | 3.667 | 3.000 | 3.667 | 4.000 | 3.000 | 4.000 | 3.000 | 3.476 | 0.466 |
| Communication | 4.000 | 4.000 | 4.000 | 4.000 | 3.500 | 4.000 | 3.000 | 3.786 | 0.393 |
| Content precision | 4.000 | 3.000 | 3.667 | 3.667 | 3.000 | 4.000 | 4.000 | 3.619 | 0.448 |
| Making Connections | 4.000 | 2.000 | 3.667 | 4.000 | 3.000 | 4.000 | 3.000 | 3.381 | 0.756 |
| Lesson objectives | 4.000 | 3.000 | 4.000 | 4.000 | 3.000 | 4.000 | 3.000 | 3.571 | 0.535 |
| Strategies and Differentiation | 3.000 | 2.000 | 4.000 | 3.333 | 3.000 | 3.500 | 3.000 | 3.119 | 0.614 |
| Technology | 3.667 | 3.000 | 4.000 | 4.000 | 3.500 | 3.000 | 3.000 | 3.452 | 0.459 |
| Student engagement | 3.667 | 3.000 | 4.000 | 3.667 | 3.000 | 4.000 | 4.000 | 3.619 | 0.448 |
| Student misconception | 3.667 | 3.000 | 4.000 | 4.000 | 3.000 | 3.500 | 3.000 | 3.452 | 0.459 |
| Questioning | 3.667 | 3.000 | 4.000 | 3.333 | 3.000 | 3.500 | 3.000 | 3.357 | 0.390 |
| Closure | 3.333 | 2.000 | 3.333 | 3.333 | 3.000 | 3.500 | 3.000 | 3.071 | 0.508 |
| Assessment | 3.667 | 3.000 | 3.000 | 4.000 | 3.000 | 4.000 | 3.000 | 3.381 | 0.488 |
| Teacher Disposition | 3.333 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 3.905 | 0.252 |
| Equity | 3.333 | 3.000 | 4.000 | 3.667 | 4.000 | 4.000 | 3.000 | 3.571 | 0.460 |
| Instructional tools | 3.667 | 3.000 | 4.000 | 4.000 | 3.500 | 4.000 | 3.000 | 3.595 | 0.450 |
| Active engagement | 3.667 | 3.000 | 4.000 | 4.000 | 3.000 | 3.500 | 3.000 | 3.452 | 0.459 |
| Reflection on assessment data | 3.667 | 4.000 | 3.667 | 4.000 | 3.000 | 4.000 | 2.000 | 3.476 | 0.742 |
| Professional resources | 3.000 | 3.000 | 3.667 | 4.000 | 3.000 | 3.500 | 3.000 | 3.310 | 0.413 |
| Overall performance | 3.667 | 3.000 | 4.000 | 3.667 | 3.000 | 4.000 | 3.000 | 3.476 | 0.466 |

Teacher Candidate: _____ Observation No. _____

Lesson Date: _____ Lesson Topic: _____

Observed by: _____

This rubric is intended to be used to provide feedback to the Teacher Candidate (TC) on the planning, implementation, and success of a single lesson. It is recommended that you take notes while watching the lesson. After observing the lesson, circle the statement that best describes what you have observed.

| I. Design of Instruction | Exceptional (Target) | Proficient (Acceptable) | Needs Improvement (Unacceptable) |
|---|---|---|---|
| **Lesson objectives** | Lesson addresses appropriate learning goals that are aligned to the Common Core Mathematics Standards and Practices. Objectives are clear, measurable, performance-based, and relate to important concepts and/or skills. | Lesson addresses appropriate learning goals that are aligned to the Common Core Mathematics Standards and Practices. Objectives may need re-wording, but are mostly clear, measurable, and performance-based. | Lesson does not address appropriate learning goals or is not aligned to the Common Core Mathematics Standards and Practices. Objectives are unclear, and may not be measurable, performance-based, or relate to important concepts and/or skills. |
| **Technology** | TC has incorporated mathematics-specific and instructional technologies where appropriate in order to build all students' conceptual understanding and procedural fluency. | TC has incorporated some mathematics-specific and instructional technologies where appropriate, but other technologies could sometimes be used to build all students' conceptual understanding or procedural fluency. | Incorporation of mathematics-specific and instructional technologies is minimal and could be used to build student understanding. |
| **Developmentally appropriate practice** | TC incorporates developmentally appropriate mathematical activities and investigations that require active engagement in building new knowledge throughout the lesson. | TC incorporates developmentally appropriate mathematical activities and investigations that require active engagement. | Activities are developmentally inappropriate for students or have students as passive recipients throughout the lesson . |
| **Strategies and differentiation** | TC has explicitly incorporated a wide variety of mathematics curricula and strategies, including differentiated instruction for diverse populations in order to build all students' conceptual understanding and procedural fluency. | TC has incorporated a variety of mathematics curricula and strategies, including differentiated instruction for diverse populations, but it is not always clear how it will build all students' conceptual understanding and procedural fluency. | The variety of mathematics curricula and strategies, or differentiated instruction for diverse populations, is minimal. |

# LESSON OBSERVATION RUBRIC

| II. Implementation | Exceptional | Proficient | Needs Improvement |
|---|---|---|---|
| **Lesson beginning** | Is an activity that activates prior knowledge, stirs inquiry, launches, and connects to lesson. | Is an activity that activates prior knowledge, generates interest, launches and connects to lesson. | Is an activity that does not activate prior knowledge, does not engage students, or does not connect to lesson. |
| **Teacher Disposition** | TC has a confident teaching presence. Exhibits knowledge of adolescent learning, development, and behavior and consistently demonstrates a positive disposition toward mathematical processes and learning. | TC is not always confident, but demonstrates a positive disposition toward mathematical processes and learning. | TC does not display a confident teaching presence and does not demonstrate a positive disposition toward mathematical processes and learning. |
| **Content Precision** | TC uses the language of mathematics to express ideas precisely, and communicates mathematical thinking coherently and clearly. | TC mostly uses the language of mathematics to express ideas precisely, but does not always communicate mathematical thinking coherently and clearly. | TC does not use the language of mathematics to express ideas precisely, and does not communicate mathematical thinking coherently and clearly. |
| **Effectiveness of Communication** | TC uses appropriate mathematical vocabulary and symbols to communicate mathematical ideas, uses multiple representations to model and describe mathematics, and implements strategies to help students do the same throughout the lesson. | TC uses appropriate mathematics vocabulary, symbols, and multiple representations, but may not direct student attention to vocabulary, symbol, and representation meaning consistently or effectively. Student communication of mathematical ideas and symbols to others and use of multiple representations is sporadic. | TC uses appropriate mathematics vocabulary, symbols, and multiple representations inconsistently or ineffectively. Student communication of mathematical ideas and symbols to others and use of multiple representations is minimal. |
| **Development of conceptual understanding and problem solving** | TC teaches through problem solving; that is, uses problem solving to help students build new mathematical knowledge and develop conceptual understanding, and helps students to develop and test conjectures in order to frame generalizations. | TC helps students build new mathematical knowledge and develop conceptual understanding. | TC does not teach through problem solving or help students build new mathematical knowledge or develop conceptual understanding. |
| **Problem Solving** | TC provides opportunities for students to solve a variety of problems within the field of mathematics and other contexts, and helps students to persevere, and to apply and adapt a variety of strategies when solving them. | TC provides some opportunities for students to solve problems within the field of mathematics or other contexts, and helps students to persevere, and to apply and adapt a variety of strategies when solving them. | TC does not provide problem solving opportunities for students in the lesson. |

# LESSON OBSERVATION RUBRIC

| | | | |
|---|---|---|---|
| **Reasoning and Proof** | Opportunities for student engagement in reasoning (abstract, quantitative, and reflective) with attention to units if applicable, as well as construction of viable arguments and proofs, and critique of others' reasoning are integrated throughout the lesson. | Opportunities for student engagement in reasoning (abstract, quantitative, or reflective) with attention to units if applicable, as well as construction of viable arguments and proofs, and critique of others' reasoning are mostly guided by the TC. | TC provides minimal opportunities for student engagement in reasoning. |
| **Reasoning and Proof - Part 2** | Discussions, activities, and tasks guide students throughout the lesson to represent and model generalizations using mathematics, to recognize structure, and to express regularity in patterns of mathematical reasoning. | Some discussions, activities, or tasks guide students to represent and model generalizations using mathematics, to recognize structure, or to express regularity in patterns of mathematical reasoning. | Discussions, activities, or tasks minimally guide students to represent and model generalizations using mathematics, to recognize structure, or to express regularity in patterns of mathematical reasoning. |
| **Making Connections** | TC demonstrates the interconnectedness of mathematical ideas and how they build on one another, and recognizes and uses connections among mathematical ideas and across various content areas and real-world contexts. | TC demonstrates the interconnectedness of mathematical ideas and how they build on one another and makes connections to real-world contexts. | Connections among mathematical ideas or real-world contexts are minimal. |
| **Student engagement** | Lesson engages students in meaningful work by the inclusion of high quality tasks. | Lesson engages most students in meaningful work by the inclusion of at least one high quality task. | Lesson does not include high quality tasks or engage students. |
| **Student misconceptions** | TC identifies the key mathematical ideas and student misconceptions and addresses them. | TC identifies the key mathematical ideas and student misconceptions and includes plans to address them, but may not always successfully implement them. | TC may identify the key mathematical ideas and student misconceptions, but does not include plans to address them. |
| **Equity** | Pedagogical and classroom management strategies demonstrate equitable treatment of students. High expectations are held and instruction challenges all learners. | Pedagogical and classroom management strategies mostly demonstrate equitable treatment of students. Instruction challenges most learners. | Pedagogical and classroom management strategies do not demonstrate equitable treatment of students. It is not clear that high expectations are held for all students. |

# LESSON OBSERVATION RUBRIC

| | | | |
|---|---|---|---|
| **Use of Instructional Tools** | TC uses appropriate instructional tools such as manipulatives, drawings, physical models, virtual environments, spreadsheets, presentation tools, and mathematics-specific technologies. All tools that were chosen enhance the teaching and learning of the mathematics content, and nothing would be clearly enhanced by the inclusion of other tools. The limitations of chosen tools are explicitly discussed, including alternate tools to address those limitations. | TC uses appropriate instructional tools such as manipulatives, drawings, physical models, virtual environments, spreadsheets, presentation tools, and mathematics-specific technologies. Most tools that were chosen enhance the teaching and learning of the mathematics content, but the lesson would be clearly enhanced by the inclusion of other tools. | Instructional tools are minimally evident in the lesson. Multiple tools that were not chosen would likely have enhanced the learning opportunities. |
| **Questioning** | TC uses explicit strategies to include all students in mathematical discussions. Questioning strategies are explicitly planned to guide students to higher order thinking about key mathematical ideas. | TC uses strategies to include most students in mathematical discussions. | Mathematical discussions are mostly teacher-centered. Questioning strategies do not guide students to higher order thinking about key mathematical ideas. |
| **Managing Transitions** | TC's transitions make effective connections between lesson activities. | TC's transitions are mostly effective in making connections between lesson activities. | TC's transitions are absent or underdeveloped. |
| **Pacing** | Lesson is well paced. | Parts of the lesson are well paced. | Lesson is not effectively paced. |
| **Managing instructional time and space.** | TC is consistent in maintaining positive and appropriate classroom control. | TC is generally consistent in maintaining positive and appropriate classroom control. | TC is inconsistent or unable to maintain classroom control. |
| **Closure** | Closes lesson effectively to encourage student reflection and uses multiple strategies, including listening to and understanding the ways students think about mathematics, to assess student learning and mathematical proficiencies that are essential for all students. | Closes lesson to encourage student reflection and uses strategies to assess student learning. | There is no closure activity or student reflection. |
| **Assessment** | TC plans, implements, and interprets a variety of formative and summative assessments and uses the data to inform instruction. | TC uses both formative and summative assessments to evaluate student learning in the lesson. | TC does not include both formative and summative assessment in the lesson. |

# LESSON OBSERVATION RUBRIC

NOTES/NARRATIVE COMMENTS: