

**RUBRICS
FOR
SECONDARY MATHEMATICS EDUCATION STANDARDS**

**SOE STANDARD –DISCIPLINARY FOUNDATIONS
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Disciplinary foundations: demonstrates interpretive, normative, critical understanding of educational phenomenon through the use of the humanities, social sciences and psychological sciences within the disciplinary foundations of education (e.g., anthropology, history, philosophy and psychology of education)

| | DOES NOT MEET (undergraduate/graduate level) | MEETS (undergraduate/graduate level) | EXCEEDS (undergraduate/graduate level) |
|--|---|--|---|
| Knowledge Bases of Disciplinary Foundations | Understands in a limited or perfunctory way one or more of the disciplinary foundations as related to the interpretive study of the social and cultural contexts and complexities of educational phenomenon and/or praxis. (e.g., no appreciation for the interpretive study of educational phenomenon as related to the disciplinary foundations of education) | Demonstrates a beginning (minimum), and general awareness and appreciation of one or more of the disciplinary foundations as related to the interpretive study of the social and cultural contexts and complexities of educational phenomenon and/or praxis (e.g., can identify and summarize the essential or core ideas, concepts and theories.) | Demonstrates exceptional and sophisticated appreciation, clarity, creativity and critical/analytical understanding of one or more of the disciplinary foundations as related to the interpretive study of the social and cultural contexts and complexities of educational phenomenon and/or praxis. (e.g., exhibits analytical sophistication.) |
| Modes of inquiry | Exhibits little or no interests in developing the critical/analytical skills and understanding for using the interpretive modes of educational inquiry as related to one or more of the disciplinary foundations knowledge bases. | Exhibits a general appreciation for developing the critical/analytical skills and understanding necessary for using interpretive modes of educational inquiry related to the disciplinary foundations knowledge bases. | Demonstrates an exceptional and sophisticated ability to critically/analytically use interpretive modes of educational inquiry to develop systematic logical argument(s) and synthesis issues and ideas related to one or more of the disciplinary foundations of education knowledge bases. |
| Interpreting Educational Frameworks | Exhibits little or no appreciation for past and present ideas, theories and/or intellectual traditions in one or more of the disciplinary foundations of education as it relates to the interpretive study of educational phenomenon and/or praxis. | Exhibits a general appreciation for the past and present ideas in the interpretive study of educational phenomenon and/or praxis as related to one or more of the disciplinary foundations knowledge bases. (e.g., desires to make connections between past and/or present theories and/or intellectual traditions) | Demonstrates an exceptional and sophisticated appreciation of past and/or present ideas, theories and/or intellectual traditions for the interpretive study of educational phenomenon and/or praxis (e.g., exhibits an extraordinary desire to creatively, critically and systematically interpret the connections between past and/or present theories and/or intellectual traditions. |

Prepared by Stephen Haymes June 5, 2002

**SOE STANDARD --TRANSFORMATION
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Transformation: Demonstrates an understanding of the human transformative dimension of educational phenomenon and/or praxis at the level of the self and/or the social.

| | DOES NOT MEET (undergraduate/graduate level) | MEETS (undergraduate/graduate) | EXCEEDS) (undergraduate/graduate level) |
|---|---|--|--|
| Understanding Frameworks of Transformation | Understands in a limited or perfunctory way theoretical frameworks of human transformation in social and cultural contexts as related to educational phenomenon and/or praxis (e.g., no appreciation for the educational study of human transformation in social and cultural contexts. | Demonstrates a beginning (minimum), and general awareness and appreciation for theoretical frameworks of human transformation in social and cultural context as related to educational phenomenon and/or praxis (e.g., exhibits an appreciation and desire to know; can identify and summarize the essential or core ideas, concepts and theories as related to the educational study of human transformation in social and cultural contexts. | Demonstrates exceptional and sophisticated appreciation, clarity, creativity and critical/analytical understanding for theoretical frameworks of human transformation in social and cultural context as related to educational phenomenon and/or praxis. (e.g., exhibits analytical sophistication and exceptional appreciation for the educational study of human transformation in social and cultural contexts) |
| Analytical Skills of Transformation | Exhibits little or no interests in developing the ability and critical/analytical skills necessary to understand and appreciate the organizing principles influencing the educational dynamics of human transformation. | Exhibits a general appreciation for developing the ability and critical/analytical skills necessary to understand the organizing principles influencing the educational dynamics of human transformation. | Demonstrates an exceptional and sophisticated ability and use of critical/analytical skills necessary to understand the organizing principles influencing the educational dynamics of human transformation. |

Prepared by Stephen Haymes, June 5, 2002

**SOE STANDARD -- IDENTITY DEVELOPMENT
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Identity Development. Understands the sociocultural process of human development over the lifespan and historical time, the dynamic of identity construction through interpersonal and societal relations, and the role of individual agency and collective action in bringing about personal and social transformation.

| | DOES NOT MEET (at the preservice level) | MEETS (at the preservice level) | EXCEEDS) (at the preservice level) |
|--|---|--|---|
| Disciplinary Bases of Identity Development | Demonstrates a limited (rote) understanding of the social and cultural dimensions of human development. Exhibits limited ability or an unwillingness to engage new ideas, theories, and concepts, or to consider the ways in which social, cultural and institutional factors shape human development. | Demonstrates a basic understanding of human development as a social, psychological, and cultural process within and across generations (e.g. articulates and compares focal theoretical perspectives, their implications, and limitations). | Demonstrates a profound understanding of the social, psychological, and cultural dimensions of human development within the lifespan and across historical time. Poses thoughtful, insightful questions and initiates analytical, theoretically grounded, interdisciplinary inquiry to examine and address complex issues regarding human life. |
| Human Development and Identity Transformation Processes | Demonstrates a limited interest in or understanding of the role of power and privilege in the construction of identities and the processes of human growth and change. Demonstrates an inability to consider, embrace, or systematically challenge new ideas through written inquiry, analysis, or discussion, or debate. | Demonstrates a basic, minimal understanding of the role of social institutions and power relationships in constructing/ contesting identities and processes of human development. Has a beginning appreciation for the sociological dimensions as well as the psychological dimensions of human development. | Demonstrates a broad-based understanding of the complex role of institutions and societal relations of power and privilege in the construction of identities and in shaping multiple aspects of human growth and change. Demonstrates a sophistication in interrogating and synthesizing the multifaceted, complex interdependent relationship between individuals and social dimensions of human thought and activity. |
| Understanding Identity Dimensions | Demonstrates limited understanding of identity as a social construction and the interdependence of dimensions of identity. Displays an inability or unwillingness to be self-reflexive or develop the skills/tools to understand the significance of dimensions of identity. | Demonstrates a general understanding and appreciation of dimensions of identity, e.g. race, social class, and gender as interdependent social constructions that are forged in the context of sociohistorical relationships. | Demonstrates profound understanding of the sociocultural/historical construction of identities created in the context of socioeconomic and political relationships. Able to critically examine, self-reflexively engage, and problematize identificatory meanings, lived experiences and institutional practices that inform concepts and representations of the self and other. |
| Self-Reflective Processes | Demonstrates little understanding of or is unable to grasp the sociocultural or historical nature of the process of identity formation, e.g. is unable to simultaneously consider individual-psychological and the social-relational nature of human growth and change. | Demonstrates a self-reflective understanding of identity as a sociocultural, historical process of meaning-making on the individual and social level. | Demonstrates a deep, self-reflective understanding of the sociocultural and historical process of identity formation. Exhibits an ability to analyze and examine the complex relationship between maturational processes at the individual level and sociohistorical processes at the societal level. |

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| Institutional and Human Roles in Identity Construction | Demonstrates a limited understanding of the role of institutions or societal structures in the construction of individual and social identities. | Demonstrates a basic understanding of the role of institutions and human agency in shaping and contesting identity constructions in the context of social relations. | Demonstrates an understanding of the role of human agency and institutions in processes of identity construction that promote personal and social transformation. Illustrates an interest in and commitment to critically examine and interpret theoretical perspectives, institutional policy and social practice as they inform the construction and negotiation of identities. |
| Difference and Multivocality | Demonstrates a limited or no understanding of difference or multivocality in education and the importance of social equity in promoting human growth and change. | Demonstrates an understanding of difference and multivocality in education in promoting social equity and human growth and change, e.g. curriculum, policy, professional practice. | Demonstrates a profound understanding of difference and multivocality in multiple educational sites in promoting/inhibiting human growth and change. Values and demonstrates the ability to interpret and synthesize a multiplicity of voices and theoretical perspectives and to consider their implications for educational policy and practice |

**SOE STANDARD – UNDERSTANDING DIFFERENCE
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Understanding Difference. Understands the multiple subjectivities and social relations of race, ethnicity, class, gender, and sexuality as they define a range of possibilities for all youth irrespective of differences.

| | DOES NOT MEET (at the preservice level) | MEETS (at the preservice level) | EXCEEDS) (at the preservice level) |
|---|---|--|--|
| Social Relations of Inequality | Demonstrates a limited understanding of the social constructs of race, social class, and gender, and are unable to grasp the hierarchical relationships in society that institutionalizes privileged positions for some and marginalized positions for others. | Understands that race, social class, gender and other dimensions of identity are social constructs that grow out of relations of power that privilege some and marginalize others. | Demonstrates a broad understanding of and ability to examine the multiple expressions of societal relations of power and privilege that historically frame the constructs of race, social class, gender, etc. and frame the lived experiences of individuals and dynamics amongst groups within/across institutions and national boundaries. |
| Multiple Dimensions of Identity | Demonstrates a limited understanding of the relationship between an individual's or group's lived experience and social position as it contributes to the interdependent individual and social identities constructed. | Understands that identity construction processes mutually inform individuals' lived experience and social position across social contexts and that individuals negotiate multiple dimensions of identity that are informed by and frame their lived experience and social position across social contexts. | Demonstrates an understanding of the complex the relationship between the construction of social identities, individuals' lived experiences and perceptions, and the relative positions of power and privilege of marginalized/dominant groups that reaffirm/ contest the identificatory constructs. Understands the contradictory and complex negotiations of meaning that are interdependently created through an individuals' and groups' lived experience and social position. |
| Educational contexts and identity construction | Demonstrates a limited understanding of and interest in the role of educational institutions and pedagogical practices in the construction of dimensions of identity and a limited understanding of the role of social constructs in maintenance/ disruption of relations of social inequity. | Understands that educational contexts are instrumental in the construction of identities, that these constructs inform individual/ collective expressions of/reactions to individual/collective difference, and can reinforce social hierarchies of power. | Demonstrates an understanding of the complex and multifaceted role of social institutions, pedagogical practices and structures of power, in constructing identities and promoting ideological formations that mutually reinforce/contest hierarchical social relations in educational and other institutions, both nationally and globally. |

**SECONDARY MATH STANDARD -- PROBLEM SOLVING
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Problem Solving. Knows, understands and applies the process of mathematical problem solving.

| | NOT MET | MET | EXCEEDS |
|------------------------------|--|---|--|
| Understanding | Understanding of strategies for problem solving is inadequate | Understands many strategies for problem solving | Understanding of many strategies for problem solving is keen and deep |
| Use | Attempts to apply and adapt strategies to solve problems in mathematics and other contexts are inadequate and/or monitoring and reflection on the process of mathematical problem solving are insufficient, thereby limiting the ability to build new mathematical knowledge and extend generalizations to other problem situations. | Applies and adapts strategies to solve problems in mathematics and other contexts; monitors and reflects on the process of mathematical problem solving, thereby building new mathematical knowledge and extending generalizations to other problem situations. | Application and adaptation of strategies to solve problems in mathematics and other contexts are highly effective and monitoring and reflection on the process of mathematical problem solving are exceptionally strong and systematic, thereby significantly increasing the ability to build new mathematical knowledge and extend generalizations to other problem situations. |
| Classroom application | Use of problem explorations and modeling to extend the mathematical knowledge of all students is insufficient, ineffective, or inappropriate. | Uses problem explorations and modeling to extend the mathematical knowledge of all students. | Use of problem explorations and modeling to extend the mathematical knowledge of all students is creative, well-planned, and highly effective |

**SECONDARY MATH STANDARD –REASONING AND PROOF
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Reasoning and Proof. Reasons, constructs, and evaluates mathematical arguments and develop an appreciation for mathematical rigor and inquiry.

| | NOT MET | MET | EXCEEDS |
|------------------------------|---|---|--|
| Understanding | Recognition of reasoning and proof as fundamental aspects of mathematics is minimal, and/or understanding of the various ways of reasoning with respect to concepts, procedures, and conjectures is inadequate. | Recognizes reasoning and proof as fundamental aspects of mathematics, and understands the various ways of reasoning with respect to concepts, procedures, and conjectures. | Recognition of reasoning and proof as fundamental aspects of mathematics is unusually perceptive, and understanding of the various ways of reasoning with respect to concepts, procedures, and conjectures is exceptionally acute. |
| Use | Ability to make, select, investigate and/or evaluate mathematical arguments and methods of proof is inadequate, and/or application of mathematical reasoning and appropriate technologies in the development of concepts, procedures, and conjectures and generalization of reasoning skills to other contexts is inadequate. | Makes, selects, investigates and evaluates mathematical arguments and methods of proof, applying mathematical reasoning and appropriate technologies in the development of concepts, procedures, and conjectures and generalizing reasoning skills to other contexts. | Ability to make, select, investigate and/or evaluate mathematical arguments and methods of proof is exceptionally skillful, and application of mathematical reasoning and appropriate technologies in the development of concepts, procedures, and conjectures and generalization of reasoning skills to other contexts is highly effective. |
| Classroom application | Use of mathematical arguments involving reasoning and proof to extend mathematical knowledge and encourage an appreciation for mathematical rigor and inquiry in all students is insufficient, ineffective, or inappropriate. | Uses mathematical arguments involving reasoning and proof to extend mathematical knowledge and encourage an appreciation for mathematical rigor and inquiry in all students. | Use of mathematical arguments involving reasoning and proof to extend mathematical knowledge and encourage an appreciation for mathematical rigor and inquiry in all students is creative, well-planned, and highly effective. |

**SECONDARY MATH STANDARD -- MATHEMATICAL COMUNICATION
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Mathematical Communication. Communicates own mathematical thinking orally and in writing to peers, faculty and others.

| | NOT MET | MET | EXCEEDS |
|------------------------------|--|--|---|
| Understanding | Understanding of the dynamics of collaborative communication is inadequate and/or ability to work with others who have diverse communication and learning styles is insufficient. | Understands the dynamics of collaborative communication and how to work with others who have diverse communication and learning styles | Understanding of the dynamics of collaborative communication is exceptionally broad and deep and ability to work with others who have diverse communication and learning styles is insufficient is especially strong and effective. |
| Use | Communication of mathematical thinking in oral, written, visual, and symbolic forms using appropriate technology to peers, faculty, and others is inadequate in coherence, precision, and clarity and/or ability to analyze and evaluate the mathematical thinking and strategies of others is inadequate. | Communicates mathematical thinking coherently, precisely, and clearly in oral, written, visual, and symbolic forms using appropriate technology to peers, faculty, and others and analyzes and evaluates the mathematical thinking and strategies of others. | Communication of mathematical thinking in oral, written, visual, and symbolic forms using appropriate technology to peers, faculty, and others is exceptional in its coherence, precision, and clarity and ability to analyze and evaluate the mathematical thinking and strategies of others is inadequate is strong and highly effective. |
| Classroom application | Analysis of the thinking and learning strategies of all students to extend mathematical knowledge is insufficient and/or ability to create a learning environment where students will be able to work collaboratively with others who have diverse communication and learning styles is minimal | Analyzes the thinking and learning strategies of all students to extend mathematical knowledge and creates a learning environment where students will be able to work collaboratively with others who have diverse communication and learning styles | Analysis of the thinking and learning strategies of all students to extend mathematical knowledge is unusually insightful and ability to create a learning environment where students will be able to work collaboratively with others who have diverse communication and learning styles is strong and highly effective |

**SECONDARY MATH STANDARD -- MATHEMATICAL CONECTIONS
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Mathematical Connections. Recognizes, uses, and makes connections between and among mathematical ideas and in contexts outside mathematics to build mathematical understanding.

| | NOT MET | MET | EXCEEDS |
|----------------------------------|---|--|--|
| Understanding connections | Understanding of the connections within the mathematics curriculum and between mathematics and/or other disciplines is inadequate. | Understands the connections within the mathematics curriculum and between mathematics and other disciplines. | Understanding of the connections within the mathematics curriculum and between mathematics and/or other disciplines us strong and insightful. |
| History of math | Knowledge of the historical development of mathematics that includes contributions of men and women from various cultures is insufficient or incorrect. | Knows the historical development of mathematics that includes contributions of men and women from various cultures. | Knowledge of the historical development of mathematics that includes contributions of men and women from various cultures is thorough, detailed, and accurate |
| Use | Has difficulty recognizing how mathematical ideas within and among the various branches of mathematics interconnect and build on one another to produce a coherent whole, using connections among mathematical ideas, and/or applying mathematics in contexts outside of mathematics. | Recognizes how mathematical ideas within and among the various branches of mathematics interconnect and build on one another to produce a coherent whole, uses connections among mathematical ideas, and can apply mathematics in contexts outside of mathematics. | Has exceptional ability to recognize how mathematical ideas within and among the various branches of mathematics interconnect and build on one another to produce a coherent whole, use connections among mathematical ideas and apply mathematics in contexts outside of mathematics. |
| Classroom application | Connection of mathematics to other disciplines (including history of math) to extend the mathematical knowledge of all students is insufficient, ineffective, or inappropriate | Connects mathematics to other disciplines (including history of math) to extend the mathematical knowledge of all students | Connection of mathematics to other disciplines (including history of math) to extend the mathematical knowledge of all students is creative, well-planned, and highly effective |

**SECONDARY MATH STANDARD -- MATHEMATICAL REPRESENTATIONS
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Mathematical Representation. Uses varied representations of mathematical ideas to support and deepen students' mathematical understanding.

| | NOT MET | MET | EXCEEDS |
|------------------------------|--|---|---|
| Understanding | Understanding of symbolic, numeric and graphical representations of mathematical situations needed to model and interpret physical, social, and mathematical phenomena is inadequate. | Understands symbolic, numeric and graphical representations of mathematical situations needed to model and interpret physical, social, and mathematical phenomena. | Understanding of symbolic, numeric and graphical representations of mathematical situations needed to model and interpret physical, social, and mathematical phenomena is unusually broad and deep. |
| Use | Use of representations to model and interpret physical, social, and mathematical phenomena, to organize, record, and communicate mathematical ideas, and/or to solve problems is inadequate. | Uses representations to model and interpret physical, social, and mathematical phenomena, to organize, record, and communicate mathematical ideas, and to solve problems. | Use of representations to model and interpret physical, social, and mathematical phenomena, to organize, record, and communicate mathematical ideas, and/or to solve problems is exceptionally skillful and insightful. |
| Classroom application | Use of varied representations of mathematical ideas to support and deepen students' mathematical understanding is insufficient, ineffective, or inappropriate | Uses varied representations of mathematical ideas to support and deepen students' mathematical understanding. | Use of varied representations of mathematical ideas to support and deepen students' mathematical understanding is creative, well-planned, and highly effective |

**SECONDARY MATH STANDARD –NUMBER AND OPERATIONS
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Number and Operations. Demonstrates computational proficiency, including a conceptual understanding of numbers, ways of representing number, relationships among number and number systems, and the meaning of operations.

| | NOT MET | MET | EXCEEDS |
|-----------------------|--|--|--|
| Concepts | Demonstrates inadequate, confused or incorrect understanding of the underlying math concepts for operations with integers, rational, real, and complex numbers. | Demonstrates an understanding of the underlying mathematics concepts for operations with integers, rational, real, and complex numbers | Analyzes and clearly explains the mathematics that underlies the procedures used for operations involving integers, rational, real, and complex numbers. |
| Properties | Demonstrates a inadequate, confused, or incorrect understanding of properties involving number and operations, mental computation, and computational estimation. | Appropriately uses properties involving number and operations, mental computation, and computational estimation. | Compares and contrasts properties of numbers and number systems including matrices and vectors. |
| Application | Demonstrates inadequate, confused, or incorrect understanding of how to apply fundamental concepts of number theory. | Demonstrates the ability to apply fundamental concepts of number theory. | Creates, solves, and applies fundamental concepts of number theory |
| Representation | Demonstrates inadequate, confused, or incorrect understanding of polar and vector representations of complex numbers | Understands polar and vector representations of complex numbers | Understanding and application of polar and vector representations of complex numbers is especially strong and insightful |

**SECONDARY MATH STANDARD –PERSPECTIVES ON ALGEBRA
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Different Perspectives on Algebra. Emphasizes relationships among quantities including functions, ways of representing mathematical relationships, and the analysis of change.

| | NOT MET | MET | EXCEEDS |
|-----------------------|---|--|--|
| Concepts | Understanding of patterns, relations, and functions in 1 or 2 variables is inadequate, confused, or incorrect | Understands patterns, relations, and functions in 1 or 2 variables | Analyzes and clearly explains the mathematics underlying the patterns, relations, and functions in 1 or 2 variables |
| Properties | Understanding of the properties of real, complex, and modular systems is inadequate, confused, or incorrect | Understands the properties of real, complex, and modular systems | Compares and contrasts the properties of real, complex, and modular systems |
| Application | Uses math models to represent and understand quantitative relationships | Uses math models to represent and understand quantitative relationships | Creates and solves problems using math models to represent and understand quantitative relationships |
| Representation | Understands a wide range of modeling applications involving graphs, tree charts, and other visual representations of data with multiple dimensions and algebraic structures | Understands multiple modeling applications involving graphs, tree charts, and other visual representations of data with multiple dimensions and algebraic structures | Understands an exceptionally wide range of modeling applications involving graphs, tree charts, and other visual representations of data with multiple dimensions and algebraic structures |

SECONDARY MATH STANDARD – GEOMETRIES
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS

Geometries. Uses spatial visualization and geometric modeling to explore and analyze geometric shapes, structures, and their properties.

| | NOT MET | MET | EXCEEDS |
|-----------------------|---|---|---|
| Concepts | Use of a formal axiomatic system to construct and analyze proofs and patterns in geometric figures is inadequate, confused, or incorrect | Uses a formal axiomatic system to construct and analyze proofs and patterns in geometric figures | Analyzes and clearly explains the use of a formal axiomatic system to construct and analyze proofs and patterns in geometric figures |
| Properties | Use of characteristics of geometric figures including symmetry, congruence, and similarity to recognize, identify, build, draw, describe, analyze and categorize two- and three-dimensional figures and tessellations is inadequate, confused, or incorrect | Uses characteristics of geometric figures including symmetry, congruence, and similarity to recognize, identify, build, draw, describe, analyze and categorize two- and three-dimensional figures and tessellations | Analyzes and clearly explains the use of characteristics of geometric figures including symmetry, congruence, and similarity to recognize, identify, build, draw, describe, analyze and categorize two- and three-dimensional figures and tessellations |
| Application | Demonstrates inadequate ability to apply geometry and trigonometry to solve practical applications | Applies geometry and trigonometry to solve practical applications | Demonstrates an exceptionally strong ability to apply geometry and trigonometry to solve practical applications |
| Representation | Demonstrates inadequate ability to build and manipulate representations of two- and three-dimensional objects and visualize objects from different perspectives | Builds and manipulates representations of two- and three-dimensional objects and visualize objects from different perspectives | Demonstrates an exceptionally strong ability to build and manipulate representations of two- and three-dimensional objects and visualize objects from different perspectives |

**SECONDARY MATH STANDARD –CALCULUS
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Calculus. Demonstrates a conceptual understanding of limit, continuity, differentiation, and integration and a thorough background in techniques and application of the calculus.

| | NOT MET | MET | EXCEEDS |
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| Concepts | Demonstrates a inadequate, confused, or incorrect conceptual understanding of and procedural facility with basic calculus concepts | Demonstrates a conceptual understanding of and procedural facility with basic calculus concepts | Demonstrates an exceptionally strong and clear conceptual understanding of and procedural facility with basic calculus concepts |
| Properties | Understanding of properties of basic calculus concepts is inadequate, confused or incorrect | Understands properties of basic calculus concepts | Analyzes and clearly explains the properties of basic calculus concepts |
| Application | Illustration of the basic concepts of calculus using concrete applications is insufficient, confused, or incorrect | Illustrates the basic concepts of calculus using concrete applications | Illustration of advanced concepts of calculus using concrete applications strong and insightful |
| Representation | Use of the concepts of calculus and mathematical modeling to represent and solve problems taken from real world concepts is inadequate, confused, or incorrect | Uses the concepts of calculus and mathematical modeling to represent and solve problems taken from real world concepts | Use of the concepts of calculus and mathematical modeling to represent and solve problems taken from real world concepts is exceptionally strong and insightful |

**SECONDARY MATH STANDARD – DISCRETE MATHEMATICS
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Discrete Mathematics. Applies the fundamental ideas of discrete mathematics in the formulation and solution of problems.

| | NOT MET | MET | EXCEEDS |
|-----------------------|--|--|--|
| Concepts | Demonstrates inadequate, confused, or inaccurate knowledge of the basic elements of discrete mathematics such as theory, recurrence relations, finite difference approaches, linear programming, and combinatorics | Knows the basic elements of discrete mathematics such as theory, recurrence relations, finite difference approaches, linear programming, and combinatorics | Demonstrates deep and thorough knowledge of the basic elements of discrete mathematics such as theory, recurrence relations, finite difference approaches, linear programming, and combinatorics |
| Properties | Understanding of the properties of the basic elements of discrete math is inadequate, confused, or incorrect | Understands the properties of the basic elements of discrete math | Analyzes and clearly explains the properties of the basic elements of discrete math |
| Application | Application of the fundamental ideas of discrete mathematics in the formulation and solution of problems arising from real world situations is inadequate, confused, or incorrect | Applies the fundamental ideas of discrete mathematics in the formulation and solution of problems arising from real world situations | Ability to apply the fundamental and advanced ideas of discrete mathematics in the formulation and solution of problems arising from real world situations is exceptionally strong |
| Representation | Understands topics from discrete math and uses of concepts of discrete mathematics and mathematical modeling to represent and solve problems taken from real world contexts is inadequate, confused, or incorrect | Understands topics from discrete math and uses concepts of discrete mathematics and mathematical modeling to represent and solve problems taken from real world contexts | Understanding of topics from discrete math and uses of concepts of discrete mathematics and mathematical modeling to represent and solve problems taken from real world contexts is especially strong and insightful |

**SECONDARY MATH STANDARD –DATA ANALYSIS, STATISTICS & PROBABILITY
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Data Analysis, Statistics & Probability. Demonstrates an understanding of concepts and practices related to data analysis, statistics & probability.

| | NOT MET | MET | EXCEEDS |
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| Concepts of Data Analysis and Statistics | Knowledge of the basic elements of data analysis and statistics such as creating tables, graphs, charts, pictures, and other visual representations of a data set, is inadequate, confused, or incorrect | Knows the basic elements of data analysis and statistics such as creating tables, graphs, charts, pictures, and other visual representations of a data set | Analyzes and explains basic and advanced elements of data analysis and statistics such as creating tables, graphs, charts, pictures, and other visual representations of a data set |
| Properties of Data Analysis and Statistics | Understanding of basic properties of data analysis is inadequate, confused, or incorrect | Understands basic properties of data analysis | Analyzes and clearly explains all relevant properties of data analysis |
| Application of Data Analysis and Statistics | Use of methods such as random sampling or random assignment of treatments to estimate population characteristics, test conjectured relationships among variables, and analyze data is inadequate or inappropriate | Uses appropriate methods such as random sampling or random assignment of treatments to estimate population characteristics, test conjectured relationships among variables, and analyze data. | Use of methods such as random sampling or random assignment of treatments to estimate population characteristics, test conjectured relationships among variables, and analyze data is sound and highly appropriate |
| Representation of Data Analysis and Statistics | Use of measures of central tendency and variation to represent data is insufficient, confused, or incorrect | Uses measures of central tendency and variation to represent data | Use of measures of central tendency and variation to represent data is well-justified and insightful |
| Concepts of Probability | Understanding of bivariate data, conditional probability, and/or geometric probability is inadequate, confused, or incorrect | Understands bivariate data, conditional probability, and geometric probability | Analysis and explanation of bivariate data, conditional probability, and/or geometric probability is well-justified and highly appropriate. |
| Properties of Probability | Understanding of basic properties of probability is inadequate, confused, or incorrect | Understands basic properties of probability | Analyzes and explains all relevant properties of probability |
| Application of Probability | Choice of an experimental design, selection or performance of proper research procedures, and/or | Chooses an appropriate experimental design, selects and performs proper research procedures, and interprets results | Choice of an experimental design, selection or performance of proper research procedures, and/or interpretation of results is advanced and highly |

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| | interpretation of results is inappropriate, confused, or incorrect | | appropriate |
| Representation of Probability | Design of investigations to collect, use, and represent data that may include bivariate data, conditional probability, and geometric probability is inappropriate, confused, or incorrect | Uses appropriate design investigations to collect, use, and represent data that may include bivariate data, conditional probability, and geometric probability. | Design of investigations to collect, use, and represent data that may include bivariate data, conditional probability, and geometric probability is highly appropriate, well-justified, and insightful. |

**SECONDARY MATH STANDARD –MEASUREMENT
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Measurement. Applies and use measurement concepts and tools.

| | NOT MET | MET | EXCEEDS |
|-----------------------|--|---|--|
| Concepts | Understanding of how to use units for measuring and/or concepts related to conversion is inadequate, confused, or incorrect and/or selection of measurement tools is appropriate | Understands how to use units for measuring as well as concepts related to conversion and selects appropriate measurement tools | Analyzes and clearly explains how to use units for measuring and/or concepts related to conversion and selection of measurement tools is well-justified and highly appropriate |
| Properties | Understanding of basic measurement properties is inadequate, confused, or incorrect | Understands basic measurement properties | Analyzes and clearly explains all relevant measurement properties |
| Application | Application of techniques, tools, and formulas to determine measurements and their applications in various contexts is inappropriate | Knows how to apply appropriate techniques, tools, and formulas to determine measurements and their applications in various contexts | Application of techniques, tools, and formulas to determine measurements and their applications in various contexts is insightful and highly appropriate |
| Representation | Ability to model and/or visualize applications in various contexts is inadequate | Models and visualizes applications in various contexts | Modeling and visualization of applications in various contexts is strong and highly appropriate |

**SECONDARY MATH STANDARD –DISPOSITIONS
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Dispositions. Supports a positive disposition toward mathematical processes and mathematical learning consistent with reform in mathematics teaching and learning and demonstrates a commitment to principles of excellence in mathematics teaching.

| | NOT MET | MET | EXCEEDS |
|------------------------------------|---|---|---|
| High Expectations | Commitment to excellence in mathematics education through high expectations and strong support for all students is inadequate or reluctant. | Is committed to excellence in mathematics education through high expectations and strong support for all students. | Commitment to excellence in mathematics education through high expectations and strong support for all students is especially strong and proactive |
| Excellent Curriculum | Commitment to excellent curriculum that is stimulating, coherent, focused on important mathematics, and well articulated across the grades is inadequate or reluctant.. | Is committed to excellent curriculum that is stimulating, coherent, focused on important mathematics, and well articulated across the grades. | Commitment to excellent curriculum that is stimulating, coherent, focused on important mathematics, and well articulated across the grades is especially strong and proactive. |
| Excellent Teaching | Commitment to excellent and effective mathematics teaching that focuses on understanding what students know and need to learn and then challenging and supporting them to learn it well is inadequate or reluctant.. | Is committed to excellent and effective mathematics teaching that focuses on understanding what students know and need to learn and then challenging and supporting them to learn it well. | Commitment to excellent and effective mathematics teaching that focuses on understanding what students know and need to learn and then challenging and supporting them to learn it well is especially strong and proactive.. |
| Learning with Understanding | Commitment to student learning with understanding, particularly to actively building new knowledge from experience and prior knowledge and combining factual knowledge, procedural facility, and conceptual understanding is inadequate or reluctant. | Is committed to student learning with understanding, particularly to actively building new knowledge from experience and prior knowledge and combining factual knowledge, procedural facility, and conceptual understanding | Commitment to student learning with understanding, particularly to actively building new knowledge from experience and prior knowledge and combining factual knowledge, procedural facility, and conceptual understanding is especially strong and proactive. |
| Integral Assessment | Commitment to use of formative and summative assessments that is an integral part of instruction, that supports the learning of important mathematics, and furnishes useful information to both teachers and students is inadequate or reluctant.. | Is committed to use of formative and summative assessments that is an integral part of instruction, that supports the learning of important mathematics, and furnishes useful information to both teachers and students. | Commitment to use of formative and summative assessments that is an integral part of instruction, that supports the learning of important mathematics, and furnishes useful information to both teachers and students is especially strong and proactive |

**SECONDARY MATH STANDARD –HUMAN DEVELOPMENT AND LEARNING
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Human Development and Learning. Understands how children learn and develop, and can provide learning opportunities that support their intellectual, social and personal development.

| | Does Not Meet (at preservice level) | Meets (at preservice level) | Exceeds (at preservice level) |
|---|---|--|--|
| Ways of Learning | Planning and/or instructional strategies reflect an inadequate understanding of the multiple ways in which students construct knowledge, acquire skills, and develop habits of mind | Planning and/or instructional strategies reflect an understanding of the multiple ways in which students construct knowledge, acquire skills, and develop habits of mind | Planning and/or instructional strategies clearly reflect a thorough understanding of the multiple ways in which students construct knowledge, acquire skills, and develop habits of mind |
| Variations in development | Planning and/or instruction reflect a inadequate appreciation of individual variation within each area of development (social, emotional, physical, moral, and cognitive) and of the diverse talents of all learners | Planning and/or instruction reflect an awareness of individual variation within each area of development (social, emotional, physical, moral, and cognitive) and of the diverse talents of all learners | Planning and/or instruction reflect a deep appreciation of individual variation within each area of development (social, emotional, physical, moral, and cognitive); understands how these factors influence learning; and address the diverse talents of learners when designing instruction |
| Assessment of developmental variations | Planning and/or instruction reflect insufficient or inappropriate assessment of individual and group performance to design learning opportunities that meets learners' current needs in each domain (cognitive, social, emotional, moral, and physical) | Planning and/or instruction reflect sufficient assessment of individual and group performance to design learning opportunities that meets learners' current needs in each domain (cognitive, social, emotional, moral, and physical) | Planning and/or instruction reflect detailed and thorough assessment of individual and group performance to design learning opportunities that meets learners' current needs in each domain (cognitive, social, emotional, moral, and physical) |
| Multiple levels of instruction | Planning and/or instruction reflects a inadequate understanding of how to introduce concepts and principles at varying levels of complexity and include student developmental factors when making instructional decisions | Planning and/or instruction reflects adequate understanding of how to introduce concepts and principles at varying levels of complexity and include student developmental factors when making instructional decisions | Planning and/or instruction reflects a thorough understanding of how to introduce concepts and principles at varying levels of complexity and a keen appreciation of how to include student developmental factors when making instructional decisions in a variety of contexts and learning situations |

**SECONDARY MATH STANDARD --DIVERSE STUDENTS
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Diverse Students. Understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

| | Does Not Meet (at preservice level) | Meets (at preservice level) | Exceeds (at preservice level) |
|---------------------------------------|--|---|--|
| Approaches to Learning | Understanding of differences in approaches to learning (e.g., different learning styles, multiple intelligences, and performance modes is inadequate) | Adequately understands differences in approaches to learning (e.g., learning styles, multiple intelligences, and performance modes) | Thoroughly understands and can identify in detail differences in approaches to learning, including different learning styles, multiple intelligences, and performance modes |
| Individual Strengths and Needs | Appreciation of differences in students' strengths and needs and understanding of how students' learning is influenced by individual experiences, talents, and prior learning, as well as language, culture, family and community values is insufficient | Appreciates differences in students' strengths and needs and understands how students' learning is influenced by individual experiences, talents, and prior learning, as well as language, culture, family and community values | Greatly appreciates differences in students' strengths and needs and well understands how students' learning is influenced by individual experiences, talents, and prior learning, as well as language, culture, family and community values |
| Learning Community | Inadequately designs a learning community in which individual differences are respected, students feel valued for their potential as people, and students learn to value each other | Designs a learning community in which individual differences are respected, students feel valued for their potential as people, and students learn to value each other | Designs a learning community in which individual differences are highly respected, students feel great value for their potential as people, and students learn to highly value each other |
| Instruction | Designs instruction that is inappropriate to students' learning styles, strengths, and needs and/or makes inadequate or inappropriate provisions for individual students who have particular learning needs | Designs instruction appropriate to students' learning styles, strengths, and needs and makes appropriate provisions for individual students who have particular learning needs | Designs instruction that is highly appropriate to students' learning styles, strengths, and needs in a variety of contexts and learning situations and makes exceptionally effective provisions for individual students who have particular learning needs |

| | | | |
|-------------------|---|---|--|
| Technology | Commitment to appropriate and responsible use of technologies in teaching and learning to enhance mathematical thinking and to provide opportunities for students to learn more mathematics more deeply is inadequate or reluctant. | Is committed to appropriate and responsible use of technologies in teaching and learning to enhance mathematical thinking and to provide opportunities for students to learn more mathematics more deeply | Commitment to appropriate and responsible use of technologies in teaching and learning to enhance mathematical thinking and to provide opportunities for students to learn more mathematics more deeply is especially strong and proactive |
|-------------------|---|---|--|

**SECONDARY MATH STANDARD – LEARNING ENVIRONMENT
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Learning Environment. Uses an understanding of individual and group motivation and behavior to Creates a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

| | DOES NOT MEET | MEETS | EXCEEDS |
|--|--|--|---|
| Mathematics Learning Environment | Has inadequate knowledge about human motivation and behavior drawn from the foundational sciences of psychology, anthropology, and sociology and/or has few strategies for organizing and supporting individual and group learning about mathematics | Uses knowledge about human motivation and behavior drawn from the foundational sciences of psychology, anthropology, and sociology to develop strategies for organizing and supporting individual and group learning about mathematics | Uses extensive knowledge about human motivation and behavior drawn from the foundational sciences of psychology, anthropology, and sociology to develop highly effective strategies for organizing and supporting individual and group learning about mathematics |
| Democratic Values | Demonstrates minimal commitment to the expression and uses of democratic values in the classroom; insufficient participation of all students in decision-making | Is committed to the expression and uses of democratic values in the classroom, ensuring satisfactory participation of all students in decision-making | Is highly committed to the expression and uses of democratic values in the classroom, ensuring full and varied participation of all students in decision-making |
| Communication and Behavioral Expectations | Creates insufficient or inappropriate expectations and processes for communication and behavior such that the amount of class time spent in learning is not adequately maximized | Adequately maximizes the amount of class time spent in learning by creating expectations and processes for communication and behavior | Efficiently maximizes the amount of class time spent in learning by creating high but achievable expectations and processes for communication and behavior |
| Classroom Management | Understanding of the principles of effective classroom management is inadequate; use of strategies to promote positive relationships, cooperation, and purposeful learning in the classroom is insufficient or inappropriate | Adequately understands the principles of effective classroom management and can use several strategies to promote positive relationships, cooperation, and purposeful learning in the classroom | Has a through understanding of the principles of effective classroom management and can use a wide variety of strategies to promote positive relationships, cooperation, and purposeful learning in the classroom |
| Organization of Resources | Does not adequately organize, allocate, and manage the resources of time, space, activities, and attention to provide active and equitable engagement of students in productive tasks | Appropriately organizes, allocates, and manages the resources of time, space, activities, and attention to provide active and equitable engagement of students in productive tasks | Organizes, allocates, and manages the resources of time, space, activities, and attention effectively and efficiently to provide active and equitable engagement of students in productive tasks |
| Evaluation and Adjustment of Environment | Analysis of the classroom environment is inadequate or inappropriate; decisions and adjustments to enhance social relationships, student motivation and engagement, and productive work are inappropriate or insufficient | Analyzes the classroom environment and makes appropriate decisions and adjustments to enhance social relationships, student motivation and engagement, and productive work | Acutely analyzes the classroom environment and makes highly appropriate and effective decisions and adjustments to enhance social relationships, student motivation and engagement, and productive work |

**SECONDARY MATH STANDARD -- PLANNING FOR INSTRUCTION
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Planning for Instruction. Plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

| | Does Not Meet (at preservice level) | Meets (at preservice level) | Exceeds (at preservice level) |
|--------------------------------------|---|---|---|
| Factors in Planning | Has inadequate understanding of learning theory, subject matter, curriculum development, and student development; use of this knowledge in planning instruction to meet curriculum goals is insufficient or inappropriate | Has adequate understanding of learning theory, subject matter, curriculum development, and student development and uses this knowledge in planning instruction to meet curriculum goals | Has excellent understanding of learning theory, subject matter, curriculum development, and student development and uses this knowledge very effectively in planning instruction to meet curriculum goals |
| Variations in Learning Styles | Plans for learning opportunities that recognize and address variation in learning styles and performance modes are insufficient or inappropriate | Adequately plans for learning opportunities that recognize and address variation in learning styles and performance modes | Plans very effectively for learning opportunities that recognize and address variation in learning styles and performance modes |
| Meeting Developmental Needs | Creation of lessons and activities that operate at multiple levels is inadequate to meet the developmental and individual needs of diverse learners | Creates lessons and activities that operate at multiple levels to meet the developmental and individual needs of diverse learners | Creates lessons and activities that operate at multiple levels such that they exceed the developmental and individual needs of diverse learners |
| Short and Long Term Planning | Has inadequate appreciation for short-range and long-term plans that are linked to student needs and performance | Recognizes the importance of both short-range and long-term planning that is linked to student needs and performance | Highly values both short-range and long-term planning that is linked to student needs and performance |
| Adjustment of Plans | Adjustment of plans in response to unanticipated sources of output, student responses, and other contingencies to meet students' needs and enhance learning is inadequate or inappropriate | Adequately adjusts plans in response to unanticipated sources of output, student responses, and other contingencies to meet students' needs and enhance learning | Effectively and systematically adjusts plans in response to unanticipated sources of output, student responses, and other contingencies to meet students' needs and enhance learning |
| Contextual Considerations | Accounting for contextual considerations (instructional materials, individual student interests, needs, and aptitudes, and community resources) in planning instruction is inadequate to create a bridge between curriculum goals and students' experiences | Knows how to take contextual considerations (instructional materials, individual student interests, needs, and aptitudes, and community resources) into account in planning instruction that adequately creates a bridge between curriculum goals and students' experiences | Knows how to efficiently take contextual considerations (instructional materials, individual student interests, needs, and aptitudes, and community resources) into account in planning instruction that creates an effective bridge between curriculum goals and students' experiences |

**SECONDARY MATH STANDARD -- INSTRUCTIONAL DELIVERY
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Instructional Delivery. Uses a variety of instructional skills and strategies to encourage students' development of critical thinking, problem solving and performance skills.

| | Does Not Meet (at preservice level) | Meets (at preservice level) | Exceeds (at preservice level) |
|--|--|--|---|
| Factors in Planning | Has inadequate understanding of learning theory, subject matter, mathematics curriculum development, student development, and learning styles; use of this knowledge in planning instruction to meet curriculum goals is insufficient or inappropriate | Understands learning theory, subject matter, mathematics curriculum development, student development, and learning styles and uses this knowledge in planning instruction to meet curriculum goals | Has excellent understanding of learning theory, subject matter, mathematics curriculum development, student development, and learning styles and uses this knowledge very effectively in planning instruction to meet curriculum goals |
| Standards and Planning | Creates inadequate short-range and/or long-term plans that are linked to appropriate learning goals (including those that address local, state, and national mathematics standards and legislative mandates), student needs and performance in inadequate ways | Creates short-range and long-term plans that are linked to appropriate learning goals (including those that address local, state, and national mathematics standards and legislative mandates), student needs, and performance | Creates highly effective short-range and long-term plans that are linked to appropriate learning goals (including those that address local, state, and national mathematics standards and legislative mandates), student needs and performance |
| Adjustment of Plans | Adjustment of plans in response to unanticipated contingencies (e.g., student responses) to meet students' needs and enhance learning is inadequate or inappropriate | Adequately adjusts plans in response to unanticipated contingencies (e.g., student responses) to meet students' needs and enhance learning | Effectively and systematically adjusts plans in response to unanticipated contingencies (e.g., student responses) to meet students' needs and enhance learning |
| Curriculum | Demonstrates inadequate ability to design instruction to meet the needs of all students and provide for students' progress and success in mathematical problem solving, in-depth conceptual understanding, and ability to test generalizations. | Aligns curriculum goals and teaching strategies with the organization of classroom environments and learning experiences to promote mathematical problem solving, develop in-depth conceptual understanding, and help students develop and test generalizations. | Strongly and effectively aligns curriculum goals and teaching strategies with the organization of classroom environments and learning experiences to promote mathematical problem solving, develop in-depth conceptual understanding, and help students develop and test generalizations. |
| Uses of Materials and Resources | Selection, use, and determination of the suitability of the wide variety of available mathematics teaching materials (including appropriate concrete materials) for teaching diverse students is inadequate, inappropriate, or ineffective | Selects, uses, and determines suitability of the wide variety of available mathematics teaching materials (including appropriate concrete materials) for all students including those with special needs such as the gifted, challenged and speakers of other languages. | Selection, use, and determination of suitability of the wide variety of available mathematics teaching materials (including appropriate concrete materials) for teaching diverse students is unusually thoughtful and highly effective |
| Instructional | Use of multiple teaching and learning | Uses multiple teaching and learning | Use of multiple teaching and learning |

| | | | |
|-----------------------------------|---|---|---|
| Strategies | strategies to engage students in active learning and mathematical problem solving, to use technology's potential for building in-depth understanding of mathematical concepts and important mathematical ideas and to help students develop and test generalizations is inadequate, inappropriate, or ineffective | strategies to engage students in active learning and mathematical problem solving, to use technology's potential for building in-depth understanding of mathematical concepts and important mathematical ideas and to help students develop and test generalizations. | strategies to engage students in active learning and mathematical problem solving, to use technology's potential for building in-depth understanding of mathematical concepts and important mathematical ideas and to help students develop and test generalizations is creative, well-planned and highly effective |
| Modification of Strategies | Monitoring and adjustment of teaching strategies is inadequate or inappropriate; insufficiently values the flexibility and reciprocity necessary for adapting instruction | Appropriately monitors and adjusts teaching strategies and values the flexibility and reciprocity necessary for adapting instruction | Carefully monitors and adjusts teaching strategies and highly values the flexibility and reciprocity necessary for adapting instruction |

**SECONDARY MATH STANDARD – CLASSROOM COMMUNICATION
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Instruction: Communication. Use their knowledge and understanding of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom

| | DOES NOT MEET (at the preservice level) | MEETS (at the preservice level) | EXCEEDS) (at the preservice level) |
|---------------------------------------|--|---|---|
| Role of Language in Learning | Demonstrates limited appreciation of the role of language in learning in inquiry, classroom interaction, and communication of thoughts in oral and written classroom activities | Demonstrates satisfactory understanding of the role of language in in inquiry, classroom interaction, and communication of thoughts in oral and written classroom activities | Demonstrates an exceptional understanding of the role of language in learning in inquiry, classroom interaction, and communication of thoughts in oral and written classroom activities |
| Culture and Gender Differences | Exhibits limited sensitivity in selecting educational materials that reflect multicultural perspectives or shows insufficient understanding about how culture and gender can effect classroom communication, collaboration, interaction with peers | Exhibits sensitivity in selecting educational materials that reflect multicultural perspectives and shows adequate understanding about how culture and gender can effect classroom communication, collaboration, interaction with peers | Exhibits little a heightened sensitivity in selecting educational materials that reflect multicultural perspectives and shows extensive understanding about how culture and gender can effect classroom communication, collaboration, interaction with peers; |
| Verbal Communication | Use of oral and written discourse to convey information, communicate thoughts, ask questions, promote active inquiry, and/or to analyze/synthesize classroom learning is limited, ineffective or inappropriate | Uses oral and written discourse appropriately to convey information, communicate thoughts, ask questions, promote active inquiry, and to analyze/synthesize classroom learning | Demonstrates an unusually effectively use of oral and written discourse to support inquiry, communicate thoughts, and reflect an in-depth analysis and synthesis of classroom learning |
| Nonverbal Communication | Use of visual, aural, kinesthetic and nonverbal cues in classroom presentations and assignments is limited, ineffective, or inappropriate, reflecting insufficient forethought and planning | Uses a variety of visual, aural, kinesthetic and nonverbal cues in classroom presentations and assignments, reflecting satisfactory forethought and planning | Demonstrates a creative and highly appropriate use of a variety of visual, aural, kinesthetic and nonverbal cues in classroom presentations and assignments that reflect thoughtful and careful foresight and planning |

**SECONDARY MATH STANDARD –ASSESSMENT
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Assessment. Understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social and physical development of the learner.

| | | | |
|--|---|---|---|
| Variety of Assessment Strategies | Knowledge of how to select, construct, and use assessment strategies and instruments (e.g. listening to and understanding the ways students think about mathematics, portfolios of student work, teacher-made tests, performance tasks, projects, student self-assessments, peer assessment, and standardized tests) is inadequate or incorrect | Knows how to select, construct, and use basic assessment strategies and instruments (e.g. listening to and understanding the ways students think about mathematics, portfolios of student work, teacher-made tests, performance tasks, projects, student self-assessments, peer assessment, and standardized tests) | Knowledge of how to select, construct, and use assessment strategies and instruments (e.g. listening to and understanding the ways students think about mathematics, portfolios of student work, teacher-made tests, performance tasks, projects, student self-assessments, peer assessment, and standardized tests) is thorough and detailed |
| Purposes of assessment | Commitment to using ongoing assessment, including listening to and understanding the ways students think about mathematics, to assess students' mathematical knowledge to improve instruction and to promote student growth rather than to deny students access to learning opportunities is inadequate or superficial | Is committed to using ongoing assessment, including listening to and understanding the ways students think about mathematics, to assess students' mathematical knowledge to improve instruction and to promote student growth rather than to deny students access to learning opportunities. | Commitment to using ongoing assessment, including listening to and understanding the ways students think about mathematics, to assess students' mathematical knowledge to improve instruction and to promote student growth rather than to deny students access to learning opportunities is strong and proactive |
| Uses of assessment | Uses of assessment to evaluate students' progress and the effect of instruction on student performance is inadequate or superficial and/or Uses of assessment to modify plans and instructional approaches is insufficient or inappropriate. | Uses assessment to evaluate students' progress and the effect of instruction on student performance and modifies plans and instructional approaches accordingly. | Uses of assessment to evaluate students' progress and the effect of instruction on student is extensive and thoroughly integrated into modification of plans and instructional approaches. |
| Student Self-assessment | Develops inadequate or inappropriate strategies for assessment that allow all students to understand what they know and can do in light of their instructional experiences and/or provides inadequate assistance to students in becoming monitors of their own work and growth in speaking, listening, writing, reading, enacting, and viewing; | Develops strategies for assessment that allow all students to understand what they know and can do in light of their instructional experiences and assists all students in becoming monitors of their own work and growth in speaking, listening, writing, reading, enacting, and viewing; | Develops highly appropriate and effective strategies for assessment that allow all students to understand what they know and can do in light of their instructional experiences and strongly encourages students in becoming monitors of their own work and growth in speaking, listening, writing, reading, enacting, and viewing; |
| Recording and communicating assessments | Records of student work and performance are inadequate and/or communication about student progress to students, parents, and other colleagues is haphazard or superficial | Maintains useful records of student work and performance and communicates student progress knowledgeably and responsibly to students, parents, and other colleagues. | Records of student work and performance are meticulous and highly useful and communication about student progress to students, parents, and other colleagues is thoughtful, well organized, and individualized |

**SOE STANDARD -- DISABILITIES
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Disabilities. Implements appropriate assessment and instruction that supports students with disabilities in mainstream/inclusive settings.

| | DOES NOT MEET | MEETS | EXCEEDS |
|---|--|---|--|
| Commitment to students with special needs | Demonstrates little or no understanding of the need to help students with disabilities achieve to their highest potential or is not committed to this goal | Demonstrates appropriate commitment to helping students with disabilities achieve to their highest potential | Demonstrates extraordinary commitment to helping students with disabilities achieve to their highest potential. |
| Implications of disability for human development | Demonstrates minimal or inadequate knowledge and application of typical and atypical development. | Demonstrates appropriate knowledge and application of typical and atypical development | Demonstrates a thorough and detailed knowledge and application of typical and atypical development |
| Special education law | Educational decisions and planning reflect minimal, inadequate, or inappropriate knowledge and application of special education law | Educational decisions and planning reflect adequate knowledge and application of core provisions of special education law | Educational decisions and planning reflect thorough and detailed knowledge and application of special education law |
| Positive climate and social interaction | Creates an inadequate or inappropriate climate for special learners and minimally promotes social interactions between typical and special learners | Creates a positive climate for special learners and promotes social interactions between typical and special learners | Proactively creates a highly positive climate and takes special care to promote social interactions between typical and special learners |
| Adapting curriculum, instruction, materials and assessment | Strategies for adapting the general curriculum, instruction, materials and assessment are incomplete, inadequate or inappropriate | Adapts the general curriculum and Uses instruction, materials and assessment that are appropriate for the needs of the special learner. | Creatively adapts the general curriculum, instruction, materials, and assessment, and incorporates assistive technology appropriate for the needs of the special learner |
| Collaboration with colleagues and families/communities | Collaboration with colleagues and families is minimal and support for students is inadequate or inappropriate | Provides appropriate support for students by collaborating with colleagues and families | Collaboration with colleagues and families to support students with disabilities is sensitive, extensive, and proactive |

SOE STANDARD -- TECHNOLOGY I
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS

Technology I. As appropriate for the discipline, enables students to learn about and to Uses technology.

| | Does Not Meet (at preservice level) | Meets (at preservice level) | Exceeds (at preservice level) |
|--|--|--|--|
| Commitment to using technology | Demonstrates little or no understanding of professional responsibility in providing engaging technology-based learning opportunities for all students | Demonstrates appropriate understanding of professional responsibility in providing engaging technology-based learning opportunities for all students | Demonstrates extraordinary understanding of & commitment to providing engaging technology-based learning opportunities for all students |
| IL Technology Learning Standards | Demonstrates insufficient core knowledge of the IL technology-related Learning Standards & technology terminology appropriate to the certificate area | Demonstrates adequate core knowledge of the IL technology-related Learning Standards & technology terminology appropriate to the certificate area | Demonstrates extensive knowledge of the core IL technology-related Learning Standards & technology terminology appropriate to the certificate area |
| Hrdware & software | Displays inadequate ability to plan technology-based activities that reflect accurate knowledge of hardware & software plus appropriate pedagogical approaches | Plans technology-based activities based on accurate knowledge of hardware & software plus appropriate pedagogical approaches | Technology-based activities reflect thorough, integrated knowledge of hardware & software plus appropriate pedagogical approaches |
| Matching technology to students' needs | Evidences inadequate or no ability to critique & Uses hardware & software based on students' learning needs | Adequately critiques & uses hardware & software based on students' learning needs | Highly individualizes hardware/ software content & students' Uses to meet individual needs & the learning situation; rationales for uses reflect keen ability to evaluate utility of the hardware &/or software for each context |
| Assessment of students' technology uses | Demonstrates inadequate ability to design & Uses assessment tools for monitoring students' growth in understanding & using technology | Designs appropriate assessment processes & procedures that monitor students' growth in understanding & using technology | Designs & integrates appropriate, multifaceted assessment tools & practices into students' engagements with technology, to monitor growth in understanding & skills |

SOE STANDARD -- TECHNOLOGY II
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS

Technology II. Understands and uses technology to enhance his/her teaching

| | Does Not Meet (at preservice level) | Meets (at preservice level) | Exceeds (at preservice level) |
|-----------------------------------|--|---|---|
| Productivity tools | Shows little or no evidence of ability to Uses productivity tools appropriately for instruction or program management | Appropriately uses basic productivity tools (e.g., word processing, spread sheet) for instruction or program management | Thoroughly & creatively integrates a variety of productivity tools into instruction &/or program management repertoire |
| Technology-based resources | Demonstrates inadequate skilled Uses of technology resources for personal professional development &/or professional communication | Appropriately uses technology resources (e.g., Internet, email, productivity tools) to research & to communicate with other professionals | Keenly chooses & skillfully uses technology-based resources for professional research & communication with the professional community |
| Ethics | Demonstrates inadequate or superficial awareness of the ethical principles involved in using and sharing technology resources and/or does not adhere to these principles | Demonstrates appropriate awareness of and adherence to the ethical principles involved in using and sharing technology resources | Models excellence in adhering to and or expressing awareness of the ethical principles involved in using and sharing technology resources |

**SECONDARY STANDARD – LITERACY TECHNIQUES & STRATEGIES
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Language Arts: Literacy Techniques & Strategies. Knows a broad range of literacy techniques and strategies for every aspect of communication and must be able to develop each student's ability to read, write, speak and listen to his or her potential within the demands of the discipline.

| | DOES NOT MEET (at the preservice level) | MEETS (at the preservice level) | EXCEEDS (at the preservice level) |
|---|---|--|---|
| Commitment to Literacy Development | Appreciation for the needs for literacy development in general and/or the commitment to being a teacher of literacy in the specific discipline and/or grade level in which he/she is teaching is limited or unenthusiastic | Understands the need for literacy development in general and is committed to being a teacher of literacy in the specific discipline and/or grade level in which he/she is teaching | Appreciation for the need for literacy development in general and the commitment to being a teacher of literacy in the specific discipline and/or grade level in which he/she is teaching is exceptionally strong |
| Understanding Language Processes | As appropriate for the grade level, understanding of the language processes of reading, writing, and oral communication in the daily classroom exchange between student and teacher, between student and student, between teacher and "text," and between student and "text" is insufficient or inaccurate. | As appropriate for the grade level, understands the language processes of reading, writing, and oral communication in the daily classroom exchange between student and teacher, between student and student, between teacher and "text," and between student and "text". | As appropriate for the grade level, understanding of the language processes of reading, writing, and oral communication in the daily classroom exchange between student and teacher, between student and student, between teacher and "text," and between student and "text" is broad and deep. |
| Literacy Techniques | As appropriate for the grade level, use of effective literacy techniques to promote word identification, activate prior knowledge, build schema to enhance comprehension, make reading purposeful and meaningful, and extend content knowledge acquired from "text." is inadequate. | As appropriate for the grade level, uses effective literacy techniques to promote word identification, activate prior knowledge, build schema to enhance comprehension, make reading purposeful and meaningful, and extend content knowledge acquired from "text." | As appropriate for the grade level, use of effective literacy techniques to promote word identification, activate prior knowledge, build schema to enhance comprehension, make reading purposeful and meaningful, and to extend content knowledge acquired from "text" is exceptionally highly effective and integrates theory and research |
| Literacy Strategies for ENL Learners | Use of strategies and techniques for teaching literacy skills to those whose first language is not English is limited or inaccurate. | Uses strategies and techniques for teaching literacy skills to those whose first language is not English. | Use of strategies and techniques for teaching literacy skills to those whose first language is not English is highly effective and integrates theory and research. |

**SECONDARY STANDARD – MODELING LITERACY SKILLS
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Language Arts: Modeling Literacy Skills. Models effective reading, writing, speaking, and listening skills during both direct and indirect instructional activities.

| | DOES NOT MEET (at the preservice level) | MEETS (at the preservice level) | EXCEEDS (at the preservice level) |
|--|--|---|---|
| Listening & Speaking Skills | One or more listening skills (focusing, thinking, asking questions, giving feedback) are weak and/or oral communication is limited in clarity, organization, coherence, supporting examples, and/or adaptation to audience | Listens well and speaks in a clear, well-organized and coherent manner, supporting ideas with explanations and examples, and adapting to the needs of listeners. | Listening skills are sensitive and highly developed and spoken language (clarity, organization, and coherence, support, and adaptation to audience), is exceptional |
| Reading Skills | Ability to understand, and/or clearly convey ideas from text limited. | Understands and clearly conveys ideas from text | Ability to understand and clearly convey ideas from text is exceptional and highly developed. |
| Writing Skills | Organization and coherence of written communication is limited and/or writer has difficulty adapting writing for different purposes and audiences | Communicates ideas in writing to accomplish a variety of purposes, and writes in a well-organized manner adapting communication as needed. | Ability to communicate ideas in writing to accomplish a variety of purposes is highly effective, and writing is exceptionally well-organized, coherent and well adapted to the individual needs of readers. |
| Modeling English | Knowledge of the rules of English is limited and/or modeling of the rules of English grammar, spelling, punctuation, capitalization, and syntax is limited or inaccurate | Knows the rules of English and models the rules of English grammar, spelling, punctuation, capitalization, and syntax in both oral and written contexts correctly during instruction. | Has detailed knowledge of the rules of English and modeling of the rules of English grammar, spelling, punctuation, capitalization, and syntax in both oral and written contexts during instruction is highly accurate and effective. |

**SECONDARY STANDARD – LANGUAGE ARTS INSTRUCTION & IMPROVEMENT
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Language Arts: Instruction &Improvement. provides a variety of instructional strategies, constructive feedback, criticism, and improvement strategies to help students improve oral and written language skills

| | DOES NOT MEET (at the preservice level) | MEETS (at the preservice level) | EXCEEDS (at the preservice level) |
|---|---|--|--|
| Appropriate, Balanced Instruction & Assessment | Ability to use culturally appropriate communication to share ideas effectively in both written and oral formats and/or ability to balance modes of communication through use of a variety of media, instructional strategies, and assessments is limited or ineffective | Uses culturally appropriate communication to share ideas effectively in both written and oral formats and balances modes of communication through use of a variety of media, instructional strategies, and assessments | Ability to use culturally appropriate communication to share ideas effectively in both written and oral formats and to balance modes of communication through use of a variety of media, instructional strategies, and assessments is outstanding and highly effective |
| Multidisciplinary Instruction in LA | Displays inadequate ability and/or disposition to analyze grade-level content area materials to create successful learning through listening, speaking, reading and writing and/or use multi-disciplinary approaches in language arts instruction. | As appropriate for the grade level, analyzes content area materials to create successful learning through listening, speaking, reading and writing, and uses multi-disciplinary approaches in language arts instruction. | Analysis of grade-level content area materials to create successful learning through listening, speaking, reading and writing, and use of multi-disciplinary approaches for language arts instruction are exceptional, thorough, and highly effective. |
| Interaction & Engagement | Ability to facilitate groups, ask questions, elicit and probe responses, and summarize for comprehension to promote engagement in language arts instruction is insufficient or ineffective. | Promotes engagement in language arts instruction through facilitating groups, asking questions, eliciting and probing responses, and summarizing for comprehension | Ability to facilitate groups, ask questions, elicit and probe responses, and summarize for comprehension to promote engagement in language arts instruction is exceptional and highly developed |
| Facilitating Effective Use of Language | Ability to build on students prior experiences and existing language skills to help children become competent and effective users of language when designing learning experiences in English language arts is limited or ineffective | Designs learning experiences in English language arts that build on students prior experiences and existing language skills to help children become competent and effective users of language | Ability to build on students prior experiences and existing language skills to help children become competent and effective users of language when designing learning experiences in English language arts is extensive, insightful, and highly effective |
| Feedback and Improvement | Use of modeling, feedback and constructive criticism to assists students to improve language skills, including those with cultural differences or whose first language is not English. is insufficient, insensitive, or ineffective. | Uses modeling, feedback and constructive criticism to assist students to improve language skills, including those with cultural differences or whose first language is not English. | Use of modeling, feedback and constructive criticism to assists students to improve language skills, including those with cultural differences or whose first language is not English are based on theory and research, culturally sensitive, and especially effective |

**SECONDARY STANDARD – SECONDARY CONTENT AREA READING IN MATH, SCIENCE, SOCIAL SCIENCE & VISUAL ARTS
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Secondary Content Area Reading. Understands the process of reading and demonstrates instructional abilities to teach reading in the discipline (math, science, social science & visual arts).

| | DOES NOT MEET (at the preservice level) | MEETS (at the preservice level) | EXCEEDS (at the preservice level) |
|----------------------------|--|--|--|
| Selecting Materials | Analysis and evaluation of content area instructional materials in terms of readability, content, length, format, illustrations, etc. is limited or inaccurate | Analyzes and evaluates content area instructional materials in terms of readability, content, length, format, illustrations, etc. | Analysis and evaluation of content area instructional materials in terms of readability, content, length, format, illustrations, etc. is highly accurate |
| Vocabulary | Lessons to develop content-area vocabulary using relationships among words, context clues, connotation and denotation are inadequate or ineffective | Plans and teaches lessons that develop content-area vocabulary using relationships among words, context clues, connotation and denotation | Lessons to develop content-area vocabulary using relationships among words, context clues, connotation and denotation are insightful and highly effective |
| Comprehension | Use of comprehension strategies that help students analyze, evaluating synthesize and summarize material, monitor comprehension, correct misunderstandings, and write about the content to improve understanding is limited or ineffective | Plans and models comprehension strategies before, during, and after reading .that help students analyze, evaluating synthesize and summarize material, monitor comprehension, correct misunderstandings, and write about the content to improve understanding. | Use of comprehension strategies before, during, and after reading that help students analyze, evaluating synthesize and summarize material, monitor comprehension, correct misunderstandings, and write about the content to improve understanding is based on theory and research and highly effective. |
| Study Strategies | Lessons to help students preview and prepare to study text, recognize organizational patterns in informational text, and use graphic organizers as an aid for recalling information are insufficient or ineffective. | Plans and teaches lessons to help students preview and prepare to study text, recognize organizational patterns in informational text, and use graphic organizers as an aid for recalling information. | Lessons to help students preview and prepare to study text, recognize organizational patterns in informational text, and use graphic organizers as an aid for recalling information are exceptionally effective |
| Inquiry Skills | Units that require students to carry out research or inquiry using multiple texts, including electronic resources are limited or ineffective. | Plans and teaches units that require students to carry out research or inquiry using multiple texts, including electronic resources. | Units that require students to carry out research or inquiry using multiple texts, including electronic resources are motivating and highly effective |
| Assessment | Monitoring of students' reading progress in content area classes through observations, work samples, and informal reading assessments is inadequate. | Monitors students' reading progress in content area classes through observations, work samples, and informal reading assessments. | Continuous, efficient monitoring of students' reading progress in content area classes through observations, work samples, and informal reading assessments yields useful exceptionally useful information. |

SOE STANDARD -- INQUIRY (T&L)
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS

Inquiry. Undertakes independent inquiry and Uses technology as one tool to assist him or her in the overall inquiry process

| | DOES NOT MEET At the preservice level | MEETS At the preservice level | EXCEEDS At the preservice level |
|---------------------------------------|--|---|---|
| Value of inquiry | Is reluctant to read or conduct research, expressing little understanding of its value in education | Explains the value of reading and conducting research in education through | Reads or conducts research with clear enthusiasm , expressing a heightened awareness of its value in education |
| Key concepts | Explanation and/or Uses of key concepts, assumptions, debates, and ways of knowing that inform the design, collection, and analysis of research in education is inadequate or incorrect | Explains and uses key concepts, assumptions, debates, and ways of knowing that inform the design, collection, and analysis of research in education | Explanation and Uses of key concepts, assumptions, debates, and ways of knowing that inform the design, collection, and analysis of research in education is skillful, thorough, and detailed |
| Designing inquiry | Design and/or conduct of inquiry in education on an independent basis is superficial, incorrect, and/or not built on existing theoretical frameworks | Designs/conducts meaningful inquiry in education on an independent basis that builds on existing theoretical frameworks | Design and/or conduct of inquiry in education on an independent basis is highly appropriate and firmly built on a thorough knowledge of existing theoretical frameworks |
| Ethical Issues in Inquiry | Has little awareness of ethical issues in research | Has basic awareness of ethical issues in research | Can explain ethical dilemmas in research clearly and thoughtfully |
| Evaluating existing research | Evaluative judgments about the quality of existing research in education are superficial or inappropriate | Makes meaningful evaluative judgments about the quality of existing research in education | Evaluative judgments about the quality of existing research in education are insightful and Demonstrates application of strong critical thinking skills |
| Uses of technology in research | Demonstrates minimal familiarity with a range of technological resources that support educational inquiry and Uses of technology when conducting research in education is minimal or inappropriate | Demonstrates familiarity with a range of technological resources that support educational inquiry and accesses appropriate technology resources when conducting research in education | Demonstrates thorough familiarity with a range of technological resources that support educational inquiry and Uses of technology when conducting research in education is highly appropriate and effective |

**SECONDARY MATH STANDARD -- COLLABORATION
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Collaboration. Fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

| | DOES NOT MEET At the preservice level | MEETS At the preservice level | EXCEEDS At the preservice level |
|--|---|---|---|
| Context and rationale for collaboration | Demonstrates inadequate understanding of schools within the larger community context and/or how all aspects of a child's experience (e.g. family circumstances, community environments, health and economic conditions) may influence students' life and learning. | Adequately understands schools within the larger community context and how all aspects of a child's experience (e.g. family circumstances, community environments, health and economic conditions) may influence students' life and learning. | Demonstrates thorough and sensitive understanding of schools within the larger community context and how all aspects of a child's experience (e.g. family circumstances, community environments, health and economic conditions) may influence students' life and learning. |
| Commitment to collaboration | Concern for all aspects of a child's well-being (cognitive, emotional, social, and physical) is inadequate and/or is reluctant to work collaboratively with diverse families, professionals, and communities to improve the overall well-being and learning environment for students. | Is appropriately concerned about all aspects of a child's well-being (cognitive, emotional, social, and physical) and is willing to work collaboratively with diverse families, professionals, and communities to improve the overall well-being and learning environment for students. | Demonstrates heightened awareness of and concern for all aspects of a child's well-being (cognitive, emotional, social, and physical) and is enthusiastic about working collaboratively with diverse families, professionals, and communities to improve the overall well-being and learning environment for students. |
| Collaboration with colleagues | Participation in collegial activities with counselors, teachers, and professionals in community agencies to improve student learning and make the entire school a productive learning environment is inadequate, inappropriate, or unproductive. | Participates appropriately in collegial activities with counselors, teachers, and professionals in community agencies to improve student learning and make the entire school a productive learning environment. | Participation in collegial activities with counselors, teachers, and professionals in community agencies to improve student learning and make the entire school a productive learning environment is proactive and highly effective |
| Collaboration with families and communities | Establishes inadequate or inappropriate relationships with diverse families, and/or has difficulty developing cooperative partnerships to support student learning and well-being. | Establishes respectful and appropriate relationships with diverse families, and seeks to develop cooperative partnerships and Uses community resources to support student learning and well-being. | Establishes respectful and productive relationships with diverse families, and develops strong and highly effective cooperative partnerships to support student learning and well-being. |
| Students Rights/Teacher Responsibilities | Collaborates in ways that Shows insufficient respect for students' rights (e.g. for equal education, appropriate education for disabled students, privacy, confidentiality, child abuse) and/or minimal efforts to uphold teacher responsibilities to respond to student needs and advocate for them. | Collaborates appropriately in ways that respect students' rights (e.g. for equal education, appropriate education for disabled students, privacy, confidentiality, child abuse) and uphold teacher responsibilities to respond to student needs and advocate for them. | Collaborates in ways that Shows heightened awareness of and respect for students' rights (e.g. for equal education, appropriate education for disabled students, privacy, confidentiality, child abuse) and makes strong, proactive efforts to uphold teacher responsibilities to respond sensitively to student needs and advocate for them. |

**SECONDARY MATH STANDARD -- REFLECTION & PROFESSIONAL GROWTH
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Reflection and Professional Growth. Is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

| | DOES NOT MEET At the preservice level | MEETS At the preservice level | EXCEEDS At the preservice level |
|---|---|--|--|
| Commitment to Reflection and Professional Growth | Commitment to self- assessment and reflection in order to refine practices that address the individual needs of students and that support appropriate professional practices for self and colleagues is inadequate or reluctant | Is committed self- assessment and reflection in order to refine practices that address the individual needs of students and that support appropriate professional practices for self and colleagues | Is strongly committed to critical thinking, self- assessment, self-directed learning, and reflection in order to continually refine practices that address the individual needs of students and enthusiastically supports appropriate professional practices for self and colleagues |
| Improving Teaching | Uses of basic sources of information (e.g., classroom observation, information about students, and research) to evaluate teaching and learning, reflection on assessment outcomes, and/or revision of practice is insufficient or inappropriate. | Uses basic sources of information (e.g., classroom observation, information about students, and research) to evaluate teaching and learning, reflects on assessment outcomes, and revises practice appropriately. | Uses multiple sources of information (e.g., classroom observation, information about students, and research) as sources for evaluating the outcomes of teaching and learning and makes careful, thoughtful efforts to experiment with, reflect on, and revise practice. |
| Professional Development | Demonstrates inadequate skills needed to engage in professional development and inform one's professional perspectives on teaching and learning and enhance classroom practice (e.g., participates in professional mathematics organizations and uses their print and on-line resources. consulting professional literature and colleagues) | Demonstrates the basic skills needed to engage in professional development and inform one's professional perspectives on teaching and learning and enhance classroom practice (e.g., participates in professional mathematics organizations and uses their print and on-line resources. consulting professional literature and colleagues) | Demonstrates strong and extensive skills needed to engage in professional development and inform one's professional perspectives on teaching and learning and enhance classroom practice (e.g., participates in professional mathematics organizations and uses their print and on-line resources.consulting professional literature and colleagues) |

**SECONDARY MATH STANDARD -- PROFESSIONAL CONDUCT
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Professional Conduct. Understands education as a profession, maintains standards of professional conduct, and provides leadership to improve student learning and well-being.

| | DOES NOT MEET At the preservice level | MEETS At the preservice level | EXCEEDS At the preservice level |
|-----------------------------------|---|--|--|
| Education as a Profession | Has insufficient understanding of the characteristics of education as a profession and/or participation in professional education organizations is minimal | Understands the characteristics of education as a profession and participates in professional education organizations appropriately | Has broad and deep understanding of the characteristics of education as a profession and participation in professional education organizations is strong, grounded in a commitment to leadership, professionalism, and an understanding of the transformative power of education |
| Laws and Policies | Does not follow laws and school policies/ procedures, and/or carries out professional responsibilities inadequately or inappropriately | Knows and follows laws and school policies/ procedures, and carries out professional responsibilities appropriately | Knows and carefully follows laws and school policies/ procedures, and carries out professional responsibilities conscientiously |
| Ethical Standards | Commitment to the highest ethical standards of professional behavior is insufficient and/or does not follow codes of professional conduct | Is committed to the highest ethical standards of professional behavior and follows codes of professional conduct | Demonstrates a very strong commitment to the highest ethical standards of professional behavior and follows codes of professional conduct carefully and conscientiously |
| Roles Beyond the Classroom | Assumption of roles beyond the classroom for the benefit students (e.g., curriculum development, staff development, student organizations, interaction with community organizations) is inadequate or inappropriate | Assumes appropriate roles beyond the classroom for the benefit students (e.g., curriculum development, staff development, student organizations, interaction with community organizations) | Assumption of roles beyond the classroom for the benefit students (e.g., curriculum development, staff development, student organizations, interaction with community organizations) is strong and proactive |