

**RUBRICS
FOR
SECONDARY SCIENCE 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.
Institutional and	Demonstrates a limited understanding of the	Demonstrates a basic understanding	Demonstrates an understanding of the role of

Human Roles in Identity Construction	role of institutions or societal structures in the construction of individual and social identities.	of the role of institutions and human agency in. shaping and contesting identity constructions in the context of social relations.	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 SCIENCE STANDARD – MOLECULES, CELLS, ORGANISMS, ECOSYSTEMS
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Core Science Content – Molecules, Cells, Organisms, & Ecosystems. Structures and interprets the central concepts and principles understood through biology including molecular and cellular sciences, organisms and ecosystems.

	Does Not Meet (at preservice level)	Meets (at preservice level)	Exceeds (at preservice level)
Molecules, Cells & Systems	Understanding of viral, subcellular, cellular, and system structure and function including organelles, cells, tissues, organs, and organ systems is insufficient or inaccurate	Understands viral, subcellular, cellular, and system structure and function including organelles, cells, tissues, organs, and organ systems	Understanding of viral, subcellular, cellular, and system structure and function including organelles, cells, tissues, organs, and organ systems is exceptionally detailed and highly accurate
Genetics	Understanding of the nature and function of the gene, with emphasis on the molecular basis of inheritance, gene expression, the cell cycle, and the transmission of genetic information is insufficient or inaccurate	Understands the nature and function of the gene, with emphasis on the molecular basis of inheritance, gene expression, the cell cycle, and the transmission of genetic information.	Understanding of the nature and function of the gene, with emphasis on the molecular basis of inheritance, gene expression, the cell cycle, and the transmission of genetic information is exceptionally detailed and highly accurate
Evolution	Understanding of theories and identifies scientific evidence related to processes of biological evolution is insufficient or inaccurate	Understands theories and identifies scientific evidence related to processes of biological evolution.	Understanding of theories and identifies scientific evidence related to processes of biological evolution is exceptionally detailed and highly accurate
Organisms	Understanding of adaptation of organisms, homeostasis within and among organisms, interaction of organisms with their environment and the human as a biological organism is insufficient or inaccurate	Understands adaptation of organisms, homeostasis within and among organisms, interaction of organisms with their environment and the human as a biological organism	Understanding of adaptation of organisms, homeostasis within and among organisms, interaction of organisms with their environment and the human as a biological organism is exceptionally detailed and highly accurate
Ecosystems	Understanding of the dynamics of populations, communities, ecosystems, and ecoregions, biodiversity, change processes, and relationships within the environment, particularly the relationship of humans as living organisms to the environment is insufficient or inaccurate	Understands the dynamics of populations, communities, ecosystems, and ecoregions, biodiversity, change processes, and relationships within the environment, particularly the relationship of humans as living organisms to the environment.	Understanding of the dynamics of populations, communities, ecosystems, and ecoregions, biodiversity, change processes, and relationships within the environment, particularly the relationship of humans as living organisms to the environment is exceptionally detailed and highly accurate
Technologies	Explanation of the technologies used to study the life sciences at the molecular, cellular, organism and ecosystem levels is insufficient or inaccurate	Explains the technologies used to study the life sciences at the molecular, cellular, organism and ecosystem levels.	Explanation of the technologies used to study the life sciences at the molecular, cellular, organism and ecosystem levels is exceptionally detailed and highly accurate

**SECONDARY SCIENCE STANDARD – MATTER, ENERGY, FORCE, MOTION
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Core Science Content – Matter, Energy, Force, & Motion. Structures and interprets the central concepts and principles understood through chemistry and physics, including matter, energy, force and motion..

	Does Not Meet (at preservice level)	Meets (at preservice level)	Exceeds (at preservice level)
Conservation	Understanding of the principle of conservation as it applies to mass, charge, momentum, and energy. Explains conservation of mass and energy and interactions of energy with matter, including changes in state.	Understands the principle of conservation as it applies to mass, charge, momentum, and energy. Explains conservation of mass and energy and interactions of energy with matter, including changes in state.	Understanding of the principle of conservation as it applies to mass, charge, momentum, and energy. Explains conservation of mass and energy and interactions of energy with matter, including changes in state is exceptionally detailed and highly accurate.
Matter	Understanding of the atomic and nuclear structure of matter, the chemical or physical properties & structures of materials and their uses, and the nature of chemical, atomic, and nuclear reactions in natural and man-made systems is insufficient or inaccurate.	Understands the atomic and nuclear structure of matter, the chemical or physical properties & structures of materials and their uses, and the nature of chemical, atomic, and nuclear reactions in natural and man-made systems.	Understanding of the atomic and nuclear structure of matter, the chemical or physical properties & structures of materials and their uses, and the nature of chemical, atomic, and nuclear reactions in natural and man-made is exceptionally detailed and highly accurate
Energy	Understanding of the nature, characteristics properties and relationships among thermal, acoustical, radiant, electrical, chemical, mechanical, and nuclear energies and energy transformations.using kinetic theory and the laws of thermodynamics is insufficient or inaccurate	Understands the nature, characteristics properties and relationships among thermal, acoustical, radiant, electrical, chemical, mechanical, and nuclear energies and energy transformations.using kinetic theory and the laws of thermodynamics	Understanding of the nature, characteristics properties and relationships among thermal, acoustical, radiant, electrical, chemical, mechanical, and nuclear energies and energy transformations.using kinetic theory and the laws of thermodynamics is exceptionally detailed and highly accurate
Force	Understanding of theories of force including concepts/ interrelationships of position, time, velocity, acceleration, gravity, friction, inertia, work, power, energy, and momentum or description the effects of gravitational, electromagnetic, and nuclear forces in real life situations is insufficient or inaccurate.	Understands theories of force including concepts/ interrelationships of position, time, velocity, acceleration, gravity, friction, inertia, work, power, energy, and momentum and describes the effects of gravitational, electromagnetic, and nuclear forces in real life situations.	Understanding of theories of force including concepts/ interrelationships of position, time, velocity, acceleration, gravity, friction, inertia, work, power, energy, and momentum and description of the effects of nuclear ,gravitational, electromagnetic forces in real life situations is exceptionally detailed and highly accurate
Motion	Understanding of theories of inertia and motion in one and two dimensions, analysis motions and interactions within the context of conservation of energy and/or momentum and prediction of the behavior of mechanical and electromagnetic waves is insufficient or inaccurate	Understands theories of inertia and motion in one and two dimensions, analyzes motions and interactions within the context of conservation of energy and/or momentum and predicts the behavior of mechanical and electromagnetic waves	Understanding of theories of inertia and motion in one and two dimensions, analysis motions and interactions within the context of conservation of energy and/or momentum and prediction of the behavior of mechanical and electromagnetic waves is exceptionally detailed and highly accurate
Technologies	Explanation of the technologies used to study matter, energy, force and motion is insufficient or inaccurate	Explains the technologies used to study matter, energy, force and motion.	Explanation of the technologies used to study matter, energy, force and motion is exceptionally detailed and highly accurate

**SECONDARY SCIENCE STANDARD – EARTH & UNIVERSE
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Core Science Content – Earth & Universe. Structures and interprets the central concepts and principles understood through earth/space science; including the earth and the universe.

	Does Not Meet (at preservice level)	Meets (at preservice level)	Exceeds (at preservice level)
Earth’s Systems and Processes	Understanding of the structure and composition of the Earth's land, water and atmospheric systems and/or explanation Earth’s dynamic processes and cycles citing real-life examples is insufficient or inaccurate	Understands the structure and composition of the Earth's land, water and atmospheric systems and explains Earth’s dynamic processes and cycles citing real-life examples	Understanding of the structure and composition of the Earth's land, water and atmospheric systems and explanation of Earth’s dynamic processes and cycles citing real-life examples is exceptionally detailed and highly accurate
Earth’s Origin and History	Understanding of the scope of geologic time and physical changes of the Earth and/or scientific theories about Earth's origin and history how those theories explain contemporary living systems is insufficient or inaccurate.	Understands the scope of geologic time and physical changes of the Earth as well as scientific theories about Earth's origin and history how those theories explain contemporary living systems.	Understanding of the scope of geologic time and physical changes of the Earth as well as scientific theories about Earth's origin and history how those theories explain contemporary living systems is exceptionally detailed and highly accurate.
Earth’s Resources	Understanding of the interrelationships between living organisms and Earth's resources and/or evaluation of the uses of Earth's resources is insufficient or inaccurate.	Understands the interrelationships between living organisms and Earth's resources and evaluates the uses of Earth's resources.	Understanding of the interrelationships between living organisms and Earth's resources and evaluation of the uses of Earth's resources is exceptionally detailed and highly accurate.
The Solar System	Understanding of the properties and dynamic nature of the solar system and objects external to the solar system and/or explanation of the relative and apparent motions of objects in the sky is insufficient or inaccurate.	Understands the properties and dynamic nature of the solar system and objects external to the solar system and explains the relative and apparent motions of objects in the sky.	Understanding of the properties and dynamic nature of the solar system and objects external to the solar system as well as explanation of the relative and apparent motions of objects in the sky is exceptionally detailed and highly accurate.
The Origin of the Universe	Understanding of the scientific theories dealing with the origin of the universe and/or analysis of evidence relating to its origin and physical evolution is insufficient or inaccurate	Understands the scientific theories dealing with the origin of the universe and analyzes evidence relating to its origin and physical evolution	Understanding of the scientific theories dealing with the origin of the universe and analysis of evidence relating to its origin and physical evolution is exceptionally detailed and highly accurate
Galaxies	Understanding of the processes involved in the life cycle of objects within the galaxies, including their physical and chemical characteristics is insufficient or inaccurate.	Understands the processes involved in the life cycle of objects within the galaxies, including their physical and chemical characteristics.	Understanding of the processes involved in the life cycle of objects within the galaxies, including their physical and chemical characteristics is exceptionally detailed and highly accurate.
Technologies	Explanation of the technologies used to study the earth sciences and the universe is insufficient or inaccurate.	Explain the technologies used to study the earth sciences and the universe.	Explanation of the technologies used to study the earth sciences and the universe is exceptionally detailed and highly accurate.

**SECONDARY SCIENCE STANDARD -- SCIENCE CONTENT IN THE MAJOR -- BIOLOGY
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Science Content in the Major --Biology.). Demonstrates in-depth knowledge of the concepts and principles understood through the science discipline of specialization (biology, chemistry, environmental science, physics)

	Does Not Meet (at preservice level)	Meets (at preservice level)	Exceeds (at preservice level)
Cell Biology	Understanding of the concepts of cell biology is inadequate or inaccurate.	Understands the concepts of cell biology.	Understanding of the concepts of cell biology is exceptionally detailed and highly accurate
Heredity	Understanding of the molecular basis of heredity and the associated mathematical probabilities of pedigrees is inadequate or inaccurate.	Understands the molecular basis of heredity and the associated mathematical probabilities of pedigrees.	Understanding of the molecular basis of heredity and the associated mathematical probabilities of pedigrees is exceptionally detailed and highly accurate
Evolution	Understanding of biological evolution is inadequate or inaccurate..	Understands biological evolution.	Understanding of biological evolution is exceptionally detailed and highly accurate
Organisms/Diversity	Understanding of organismal biology and diversity is inadequate or inaccurate..	Understands organismal biology and diversity.	Understanding of organismal biology and diversity is exceptionally detailed and highly accurate
Ecology	Understanding of ecology, environment and ecosystems is inadequate or inaccurate..	Understands of ecology, environment and ecosystems.	Understanding of of ecology, environment and ecosystems is exceptionally detailed and highly accurate
Living Systems	Understanding of the matter, energy, and organization in living systems is inadequate or inaccurate..	Understands the matter, energy, and organization in living systems.	Understanding of the matter, energy, and organization in living systems is exceptionally detailed and highly accurate

**SECONDARY SCIENCE STANDARD -- SCIENCE CONTENT IN THE MAJOR -- CHEMISTRY
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Science Content in the Major --Chemistry.). Demonstrates in-depth knowledge of the concepts and principles understood through the science discipline of specialization (biology, chemistry, environmental science, physics)

	Does Not Meet (at preservice level)	Meets (at preservice level)	Exceeds (at preservice level)
Science Kn/Skills	Basic scientific and mathematical skills, use of safe laboratory practices, and/or awareness of issues of public concern is inadequate.	Possesses basic scientific and mathematical skills, utilizes safe laboratory practices, and is aware of issues of public concern	Basic scientific and mathematical skills, use of safe laboratory practices, and awareness of issues of public concern are exceptionally strong and thorough
Atomic Matter	Understanding and/or application of the concepts of the nature of matter at the atomic level is inadequate or inaccurate.	Understands and applies the concepts of the nature of matter at the atomic level.	Understanding and/or application of the concepts of the nature of matter at the atomic level is inadequate or inaccurate.
Bonds/Compound	Understanding of the combination of elements to form bonds and the geometry and properties of the resulting compounds is inadequate or inaccurate.	Understands the combination of elements to form bonds and the geometry and properties of the resulting compounds.	Understanding of the combination of elements to form bonds and the geometry and properties of the resulting compounds is exceptionally detailed and highly accurate.
Molecules/States	Understanding of the nature and properties of molecules in the gaseous, liquid, and solid states is inadequate or inaccurate..	Understands the nature and properties of molecules in the gaseous, liquid, and solid states.	Understanding of the nature and properties of molecules in the gaseous, liquid, and solid states is exceptionally detailed and highly accurate
Solutions	Understanding of interactions of particles in solution is inadequate or inaccurate.	Understands interactions of particles in solution	Understanding of interactions of particles in solution is exceptionally detailed and highly accurate
Acid – Base Chemistry	Understanding of acid-base chemistry is inadequate or inaccurate.	Understands acid-base chemistry	Understanding of acid-base chemistry is exceptionally detailed and highly accurate
Thermodynamics	Understanding of the laws of thermodynamics and can apply them to chemical systems is inadequate or inaccurate.	Understands the laws of thermodynamics and can apply them to chemical systems	Understanding of the laws of thermodynamics and can apply them to chemical systems is exceptionally detailed and highly accurate
Reactions	Understanding of the mechanisms of chemical reactions and the theory and practical applications of reaction rates is inadequate or inaccurate..	Understands the mechanisms of chemical reactions and the theory and practical applications of reaction rates.	Understanding of the mechanisms of chemical reactions and the theory and practical applications of reaction rates is exceptionally detailed and highly accurate.
Organic Chem	Understanding of major aspects of organic chemistry is inadequate or inaccurate.	Understands major aspects of organic chemistry	Understanding of major aspects of organic chemistry is exceptionally detailed and highly accurate

**SECONDARY SCIENCE STANDARD -- SCIENCE CONTENT IN THE MAJOR – ENVIRONMENTAL SCIENCE
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Science Content in the Major –Environmental Science.). Demonstrates in-depth knowledge of the concepts and principles understood through the science discipline of specialization (biology, chemistry, environmental science, physics)

	Does Not Meet (at preservice level)	Meets (at preservice level)	Exceeds (at preservice level)
Earth & Humans	Understanding of the Earth as a physical system, the living environment, humans and their societies, and/or human-environment interactions is inadequate or inaccurate	Understands the Earth as a physical system, the living environment, humans and their societies, and human-environment interactions	Understanding of the Earth as a physical system, the living environment, humans and their societies, and/or human-environment interactions is exceptionally detailed and highly accurate
Environmental Issues	Understanding of environmental issues and possesses the skills to address these issues is inadequate or inaccurate	Understands environmental issues and possesses the skills to address these issues	Understanding of environmental issues and possesses the skills to address these issues is exceptionally detailed and highly accurate
Studying the Environment	Understanding of and can apply scientific processes and concepts to the study of environmental phenomena is inadequate or inaccurate	Understands and can apply scientific processes and concepts to the study of environmental phenomena	Understanding of and can apply scientific processes and concepts to the study of environmental phenomena is exceptionally detailed and highly accurate

**SECONDARY SCIENCE STANDARD -- SCIENCE CONTENT IN THE MAJOR -- PHYSICS
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Science Content in the Major --Physics. Demonstrates in-depth knowledge of the concepts and principles understood through the science discipline of specialization (biology, chemistry, environmental science, physics)

	Does Not Meet (at preservice level)	Meets (at preservice level)	Exceeds (at preservice level)
Science Kn/Skills	Understanding of the essential knowledge and skills needed to practice physics and/or the broad applicability of its principles to real-world situations is inadequate or inaccurate.	Understands the essential knowledge and skills needed to practice physics and understands the broad applicability of its principles to real-world situations.	Understanding of the essential knowledge and skills needed to practice physics and/or the broad applicability of its principles to real-world situations is exceptionally detailed and highly accurate
Motion	Understanding of particle and rigid body motion in its qualitative and quantitative dimensions is inadequate or inaccurate.	Understands particle and rigid body motion in its qualitative and quantitative dimensions	Understanding of particle and rigid body motion in its qualitative and quantitative dimensions is exceptionally detailed and highly accurate.
Waves	Understanding of the nature, properties, and behavior of mechanical and electromagnetic waves and how electromagnetic waves interact with matter is inadequate or inaccurate.	Understands the nature, properties, and behavior of mechanical and electromagnetic waves and how electromagnetic waves interact with matter	Understanding of the nature, properties, and behavior of mechanical and electromagnetic waves and how electromagnetic waves interact with matter is exceptionally detailed and highly accurate.
Heat/ Matter	Understanding of thermodynamics, temperature measurement and temperature-dependent properties of matter is inadequate or inaccurate.	Understands thermodynamics, temperature measurement and temperature-dependent properties of matter	Understanding of thermodynamics, temperature measurement and temperature-dependent properties of matter is exceptionally detailed and highly accurate
Electricity/Magnetism	Understanding of electricity and magnetism and the relationship between them is inadequate or inaccurate.	Understands electricity and magnetism and the relationship between them	Understanding of electricity and magnetism and the relationship between them is exceptionally detailed and highly accurate.
Nuclear Phys	Understanding of atomic and nuclear structure is inadequate or inaccurate.	Understands atomic and nuclear structure	Understanding of atomic and nuclear structure is exceptionally detailed and highly accurate.
Relativity/Quantum Mechanics/Solid State	Understanding of the basic elements and implications of special relativity, quantum mechanics, and solid-state physics is inadequate or inaccurate.	Understands the basic elements and implications of special relativity, quantum mechanics, and solid-state physics	Understanding of the basic elements and implications of special relativity, quantum mechanics, and solid-state physics is exceptionally detailed and highly accurate

**SECONDARY SCIENCE STANDARD – UNIFYING CONCEPTS OF SCIENCE
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

	Does Not Meet (at preservice level)	Meets (at preservice level)	Exceeds (at preservice level)
Basic Concepts	Demonstrates inadequate or incorrect understanding of the basic concepts in the relevant core field, consistent with the ISBE Standards	Exhibits a conceptual understanding of the basic concepts in the relevant core field consistent with ISBE Standards	Demonstrates a strong, flexible understanding of the major concepts and conceptual interrelationships in the relevant core field consistent with ISBE standards
Integration of Concepts	Demonstrates insufficient ability to develop a thematically unified framework of concepts across four core fields of science	Thematically unifies concepts from the different traditional disciplines of science in a relevant and appropriate manner.	Systematically unifies science concepts from diverse disciplines of natural science, facilitating development of a strong and highly appropriate interdisciplinary understanding of science.
Scientific Research	Has inadequate ability to conduct research in science, and/or difficulty demonstrating the ability to design and conduct open-ended investigations and report results in the context of one or more science disciplines.	Conducts limited research in science, demonstrating the ability to design and conducts open-ended investigations and reports results in the context of one or more science disciplines.	Conducts limited but original research in science, demonstrating the ability to design and conduct open-ended investigations and report results in the context of one or more science disciplines.
Mathematics	Ability to use mathematics and statistics to analyze and interpret data in the context of the core science areas is insufficient.	Uses activities employing mathematics and statistics to develop fundamental concepts in the core science disciplines and to analyze and explain data.	Actively and systematically employs mathematics and statistics to develop fundamental concepts in the core science disciplines, and to analyze and explain data.

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

Nature of Science. Defines the values, beliefs and assumptions inherent to the creation of scientific knowledge within the scientific community; contrasts science to other ways of knowing; understands the characteristics distinguishing basic science, applied science, and technology; understands the processes and conventions of science as a professional activity; and understands the standards defining acceptable evidence and scientific explanation.

	Does Not Meet (at preservice level)	Meets (at preservice level)	Exceeds (at preservice level)
Nature of Science	Activities and lessons meant to convey the nature of basic and applied sciences, including multiple ways to create scientific knowledge, the tentativeness of knowledge, and creativity based on empirical evidence are limited or inappropriate.	Uses activities and lessons designed to convey the nature of basic and applied sciences, including multiple ways to create scientific knowledge, the tentativeness of knowledge, and creativity based on empirical evidence.	Integrates activities and lessons in flexible and highly effective ways to convey the nature of basic and applied sciences, including multiple ways to create scientific knowledge, the tentativeness of knowledge, and creativity based on empirical evidence.
Scientific Knowledge	Comparison and contrast of science and nonscience are inadequate and/or lesson plans that distinguishing science and nonscience are insufficient or inappropriate.	Compares and contrasts rules of evidence and distinguishes characteristics of knowledge in science to rules and knowledge in other domains; plans lessons distinguishing science and nonscience including case studies that allow students to analyze knowledge and actions against the tenets of science.	Designs highly effective lessons distinguishing science and nonscience and referring to the continuum of criteria for evidence, including highly effective case studies that allow students to analyze knowledge and actions against the tenets of science.
Scientific Research	Explanation of how research questions and design, and data interpretation, are guided by contemporary conventions of science and concepts of the nature of knowledge are insufficient or inaccurate.	Explains how research questions and design, and data interpretation, are guided by contemporary conventions of science and concepts of the nature of knowledge.	Provides unusually clear, thorough and highly effective explanation of and lessons showing how research questions and design, and data interpretation, are guided by contemporary conventions of science and concepts of the nature of knowledge are
History of Science	Citation and/or explanation of historical events to illustrate fundamental aspects of the nature of science including the durable but tentative character of knowledge are inaccurate or inappropriate	Cites and explains historical events to illustrate fundamental aspects of the nature of science including the durable but tentative character of knowledge.	Citation and explanation of historical events as well as lessons to illustrate fundamental aspects of the nature of science including the durable but tentative character of knowledge are exceptionally clear, thorough and highly effective.

**SECONDARY SCIENCE STANDARD -- SCIENCE INQUIRY
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Science Inquiry. Engages students effectively in science inquiry (e.g., questioning and formulating solvable problems; reflecting on, and constructing, knowledge from data; collaborating and exchanging information while seeking solutions; and developing concepts and relationships from empirical experience) and facilitates understanding of the role inquiry plays in the development of scientific knowledge.

	Does Not Meet (at preservice level)	Meets (at preservice level)	Exceeds (at preservice level)
Data Collection and Interpretation	Lessons using data-based activities requiring students to reflect upon their findings, make inferences, and link new ideas to preexisting knowledge are inadequate or inappropriate.	Plans and implements data-based activities requiring students to reflect upon their findings, make inferences, and link new ideas to preexisting knowledge.	Lessons using data-based activities requiring students to reflect upon their findings, make inferences, and link new ideas to preexisting knowledge are systematic, effective, and skillful .
Methods of Inquiry	Lessons designed to include different structures for inquiry including inductive (exploratory), correlational and deductive (experimental) studies are insufficient or inappropriate.	Plans and implements activities with different structures for inquiry including inductive (exploratory), co relational and deductive (experimental) studies.	Lessons designed to include different structures for inquiry including inductive (exploratory), correlational and deductive (experimental) studies are unusually effective
Use of Questions	Questions to encourage inquiry and probe for divergent student responses, are limited or inappropriate	Uses questions to encourage inquiry and probe for divergent student responses, encouraging student questions and responding with questions when appropriate.	Questions to encourage inquiry and probe for divergent student responses are highly effective and skillfully encourage student questions
Collective Inquiry	Activities to encourage productive peer interactions and/or individual and small group activities to facilitate inquiry are inadequate or inappropriate.	Encourages productive peer interactions and plans both individual and small group activities to facilitate inquiry.	Activities to encourage productive peer interactions and individual and small group activities to facilitate inquiry are unusually well-planned and highly effective.

**SECONDARY SCIENCE STANDARD -- ISSUES OF SCIENCE
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Issues of Science. Relates science to the daily lives and interests of students and to a larger framework of human endeavor and understanding (e.g., relationships among systems of human endeavor including science and technology; relationships among scientific, technological, personal, social and cultural values; and the relevance and importance of science to the personal lives of students).

	Does Not Meet (at preservice level)	Meets (at preservice level)	Exceeds (at preservice level)
Examination of Social Issues	Activities to examine important social or technological issues (including local issues) related to applications of scientific and technological knowledge are inadequate or inappropriate.	Engages students in examination of important social or technological issues (including local issues) related to applications of scientific and technological knowledge.	Activities to examine important social or technological issues (including local issues) related to applications of scientific and technological knowledge are creative and highly effective.
Values and Science	Analysis of and/or activities to engage students in discussions of how values affect scientific knowledge and its applications in technology and society are limited or inappropriate.	Analyzes and engages students in discussions of how values affect scientific knowledge and its applications in technology and society.	Analysis of and/or activities to engage students in discussions of how values affect scientific knowledge and its applications in technology and society are insightful and unusually effective.
Personal and Interdisciplinary Connections	Ability to relate science to the personal lives and interests of students, to potential careers, and to knowledge in other domains and incorporate interdisciplinary activities into instruction is insufficient	Relates science to the personal lives and interests of students, to potential careers, and to knowledge in other domains and incorporate interdisciplinary activities into instruction.	Personalizes science where appropriate and works effectively with other professionals, including social science and technology education to highlight science careers and incorporate interdisciplinary activities into instruction.

**SECONDARY SCIENCE STANDARD -- TECHNOLOGICAL DESIGN
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Technological Design. Understands the concepts, principles, and practices of technological design.

	Does Not Meet (at preservice level)	Meets (at preservice level)	Exceeds (at preservice level)
Historical Perspective	Understanding of technology and technological design as the use of tools throughout human history is weak or inaccurate.	Understands technology and technological design as the use of tools throughout human history.	Understanding of technology and technological design as the use of tools throughout human history is exceptionally strong and insightful.
Core Concepts	Understanding of the processes, capabilities, limitations and implications of technology and technological design and redesign is limited or inaccurate.	Understands the processes, capabilities, limitations and implications of technology and technological design and redesign.	Understanding of the processes, capabilities, limitations and implications of technology and technological design and redesign is exceptionally strong and insightful.
Investigating Problems	Ability to investigate real-world problems or needs using the inquiry process and/or identify problems to be solved through technological design is insufficient or erroneous.	Investigates real-world problems or needs using the inquiry process and identifies problems to be solved through technological designs.	Ability to investigate real-world problems or needs using the inquiry process and/or identify problems to be solved through technological design is exceptionally strong, insightful, and clearly focused.
Solving Problems	Ability to address a problem situation by proposing, implementing, and evaluating the solution, revising the design as needed, and/or communicating the design and the process is limited, erroneous, or ineffective.	Addresses a problem situation by proposing, implementing, and evaluating the solution, revising the design as needed, and communicating the design and the process.	Ability to address a problem situation by proposing, implementing, and evaluating the solution, revising the design as needed, and/or communicating the design and the process is insightful, creative, and highly effective.

**SECONDARY SCIENCE 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 limited 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 limited understanding of how to introduce science 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 science 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 science 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 SCIENCE 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 science instruction that is inappropriate to students' diverse learning styles, strengths, and needs and/or makes inadequate or inappropriate provisions for individual students who have particular learning needs	Designs science instruction appropriate to students' diverse learning styles, strengths, and needs and makes appropriate provisions for individual students who have particular learning needs	Designs science instruction that is highly appropriate to students' diverse 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

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

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

	DOES NOT MEET	MEETS	EXCEEDS
Science Learning Environment	Promotion of the elements of an exciting and stimulating science learning environment such as learning centers, exhibits, printed materials, displays, posters, aquariums, terrariums, etc. is inadequate, unsafe, or inappropriate	Identifies and promotes the elements of an exciting and stimulating science learning environment such as learning centers, exhibits, printed materials, displays, posters, aquariums, terrariums, etc.	Promotion of the elements of an exciting and stimulating science learning environment such as learning centers, exhibits, printed materials, displays, posters, aquariums, terrariums, etc. is varied, creative, and highly effective
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 thorough 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 SCIENCE 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 SCIENCE STANDARD -- SKILLS OF TEACHING
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Skills of Teaching. Creates a community of diverse student learners who can construct meaning from science experiences and possess a disposition for further inquiry and learning and applies appropriate pedagogical skills to science teaching (e.g., strategies and methodologies; interactions with students that promote learning and achievement; effective organization of classroom experiences; use of advanced technology to extend and enhance learning; and the use of prior conceptions and student interests to promote new learning).

	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, student development, and learning styles; 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, student development, and learning styles and uses this knowledge in planning instruction to meet curriculum goals	Has excellent understanding of learning theory, subject matter, curriculum development, student development, and learning styles and uses this knowledge very effectively in planning instruction to meet curriculum goals
Short and Long Term Planning	Creates inadequate short-range and/or long-term plans that are linked to student needs and performance in limited ways	Creates short-range and long-term plans that are linked to student needs and performance	Creates highly effective short-range and long-term plans that are linked to 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
Use of Materials and Resources	Enhancement of visual arts learning through the use of a variety of tools, media, and materials as well as human and technological resources is insufficient or inappropriate	Sufficiently enhances visual arts learning through the use of a variety of tools, media, and materials as well as human and technological resources	Greatly enhances visual arts learning through the creative and effective use of a wide variety of tools, media, and materials as well as human and technological resources
Instructional Strategies	Use of multiple teaching and learning skills and strategies to develop students' critical thinking, independent problem solving, and performance capabilities is insufficient or inappropriate	Adequately uses multiple teaching and learning skills and strategies to develop students' critical thinking, independent problem solving, and performance capabilities	Uses a wide variety of teaching and learning skills and strategies to carefully and effectively develop students' critical thinking, independent problem solving, and performance capabilities
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
Grouping	Ability to effectively engage students in learning science, both individually and in group work of various kinds is insufficient.	Demonstrates the ability to effectively engage students in learning science, both individually and in group work of various kinds.	Ability to effectively engage students in learning science, both individually and in group work of various kinds is unusually effective.
Teaching Science concepts	Use of diverse teaching methods to address important concepts from different perspectives and/or use learning cycles for instruction are limited or inappropriate.	Uses diverse teaching methods to address important concepts from different perspectives; and uses learning cycles for some instruction.	Use of diverse teaching methods to address important concepts from different perspectives and/or use learning cycles for instruction are highly appropriate and

			effective.
Misconceptions	Identification and anticipation of student misconceptions or naive conceptions and plans to address and modify them are inadequate or inappropriate.	Identifies and anticipates student misconceptions or naive conceptions and plans activities and discussions to address and modify them.	Identification and anticipation of student misconceptions or naive conceptions are sensitive and insightful and plans for activities and discussions to address and modify them are exceptionally thoughtful and effective

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

Classroom 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 SCIENCE STANDARD -- CURRICULUM
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS

Curriculum. Develops and applies a coherent, focused science curriculum (an extended framework of goals, plans, materials, and resources for instruction and the instructional context, both in and out of school, within which pedagogy is embedded) that is consistent with state and national standards for science education and appropriate for addressing the needs, abilities and interests of students.

	Does Not Meet (at preservice level)	Meets (at preservice level)	Exceeds (at preservice level)
Goals	Insufficiently or inappropriately relates, instructional goals, materials and actions to state and national science education standards, analyzing students' strengths and weaknesses in a particular classroom context.	Relates, instructional goals, materials and actions to state and national science education standards, analyzing students' strengths and weaknesses in a particular classroom context.	Has an exceptionally well-defined rationale for instructional goals, materials and actions in relation to state and national science education standards and an analysis of student achievement.
Resources	Development of a set of potentially useful instructional materials in the teaching field from a variety of sources including the World Wide Web is limited in quality, diversity and/or usefulness	Assembles a diverse set of potentially useful instructional materials in the teaching field from a variety of sources including the World Wide Web	Development of a set of potentially useful instructional materials in the teaching field from a variety of sources including the World Wide Web is of unusually high quality, diversity and usefulness
Plans	Development and/or implementation of long-range and unit plans, is inadequate in terms of clear rationales, goals, methods, materials and/or assessments.	Develops and implements long-range and unit plans, with clear rationales, goals, methods, materials and assessments.	Development and/or implementation of long-range and unit plans, is of extremely high quality in terms of clear rationales, goals, methods, materials and/or assessments. Such plans link experiences in the classroom to the broader world beyond and take advantage of events and topics of interest
Rationale for Technology	Definition of a rationale and long-range strategy for including technology in science education is inadequate.	Defines a rationale and long-range strategy for including technology in science education.	Defines an exceptionally cogent rationale and long-range strategy for including technology in science education that includes an inventory of technology to use effectively to develop interest and excitement during inquiry and learning and to enhance student understanding of the relationship between science and technology.
Integrated curriculum	Design, adaptation and/or implementation of learning activities that thematically relate science with other school subjects and community resources is insufficient or inappropriate.	Designs or adapts and implements learning activities that thematically relate science with other school subjects and community resources.	Designs, adapts and implements highly effective learning activities that thematically relate science with other school subjects and community resources and allows students to take advantage of their strengths and interests in other fields to learn science.

**SECONDARY SCIENCE STANDARD – SCIENCE & COMMUNITY
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Science & Community. Relates science teaching and learning to the needs and values of the community; and uses human and institutional resources in the community (i.e., social and community support network and involvement of people and institutions from the community) to advance the education of their students in science.

	Does Not Meet (at preservice level)	Meets (at preservice level)	Exceeds (at preservice level)
Community Resources	Identification of people and institutions in the community who are willing to assist in teaching certain topics, and plans for their involvement in teaching is insufficient or inappropriate.	Identifies people and institutions in the community who are willing to assist in teaching certain topics, and plans for their involvement in teaching.	Identification of people and institutions in the community who are willing to assist in teaching certain topics, and plans for their involvement in teaching is unusually strong and proactive
Community Needs and Values	Use of data about a community, its culture and its resources to plan science lessons that are appropriate for, and relevant to, students from that community is inadequate or inappropriate.	Uses data about a community, its culture and its resources to plan science lessons that are appropriate for, and relevant to, students from that community.	Use of data about a community, its culture and its resources to plan science lessons that are appropriate for, and relevant to, students from that community is highly knowledgeable and respectful of the community's needs and values.
Involving Families	Selection and/or design of activities to involve family members in the teaching and learning of science, and communicates systematically and effectively with parents or guardians is limited, reluctant, or inappropriate.	Selects or designs activities to involve family members in the teaching and learning of science, and communicates systematically and effectively with parents or guardians.	Selection and/or design of activities to involve family members in the teaching and learning of science, and communicates systematically and effectively with parents or guardians is thoughtful, proactive, and highly effective.

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

Assessment. Uses a variety of contemporary assessment strategies to evaluate the intellectual, social, and personal development of the learner in all aspects of science (e.g., alignment of goals, instruction and outcomes; measurement and evaluation of student learning in a variety of dimensions and the use of outcome data to guide and change instruction).

	Does Not Meet (at preservice level)	Meets (at preservice level)	Exceeds (at preservice level)
Variety of assessment instruments	Knowledge of how to select, construct, and use assessment strategies and instruments (e.g. observation, portfolios of student work, teacher-made tests, performance tasks, projects, student self-assessments, peer assessment, and standardized tests) is limited or incorrect	Knows how to select, construct, and use several basic assessment strategies and instruments (e.g. observation, 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. observation, 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 to improve instruction and to promote student growth rather than to deny students access to learning opportunities is limited or superficial	Is committed to using ongoing assessment to improve instruction and to promote student growth rather than to deny students access to learning opportunities.	Commitment to using ongoing assessment to improve instruction and to promote student growth rather than to deny students access to learning opportunities is strong and proactive
Uses of assessment	Use of assessment to evaluate students' progress and the effect of instruction on student performance is limited or superficial and/or use 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.	Use 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.
Additional sources of assessment	Solicits insufficient additional assessment information from multiple sources (e.g., parents and colleagues, and student self-assessment) when needed	Solicits additional assessment information from multiple sources (e.g., parents and colleagues, and student self-assessment) when appropriate	Makes extraordinary efforts to solicit additional assessment information from multiple sources (e.g., parents and colleagues, and student self-assessment) and uses them very effectively
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 limited 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 highly useful and meticulous and communication about student progress to students, parents, and other colleagues is thoughtful, well organized, and individualized
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**SECONDARY SCIENCE STANDARD – SAFETY AND WELFARE
RUBRIC FOR ASSESSMENT OF ASSIGNMENTS AND PORTFOLIO ARTIFACTS**

Safety and Welfare. Designs and manages safe and supportive learning environments (e.g., physical spaces within which learning of science occurs; psychological and social environment of the student engaged in learning science; treatment and ethical use of living organisms; and safety in all areas related to science instruction) that reflect high expectations for the success of all students.

	Does Not Meet (at preservice level)	Meets (at preservice level)	Exceeds (at preservice level)
Safe environment	Recognition of safety as a priority, use of procedures for safe handling, labeling and storage of chemicals, electrical equipment, and/or knowledge of actions to take to prevent or report an emergency are limited.	Recognizes that safety is a priority, sets up procedures for safe handling, labeling and storage of chemicals, electrical equipment, and knows actions to take to prevent or report an emergency.	Recognition of safety as a priority, use of procedures for safe handling, labeling and storage of chemicals, electrical equipment, and knowledge of actions to take to prevent or report an emergency are systematic, proactive, and exceptionally strong
Preventing problems	Understanding of liability and negligence, especially as applied to science teaching, ability to take action to prevent potential problems, and/or communication of needs and potential problems to appropriate professionals is insufficient	Understands liability and negligence, especially as applied to science teaching, takes action to prevent potential problems, and communicates needs and potential problems to appropriate professionals	Understanding of liability and negligence, especially as applied to science teaching, ability to take action to prevent potential problems, and communication of needs and potential problems to appropriate professionals are systematic, proactive, and exceptionally strong
Use and care of animals	Adherence to the standards of the science education community for ethical care and use of animals and/or knowledge of how to use preserved or live animals appropriately in keeping with the age of students and the need for such materials is inadequate.	Adheres to the standards of the science education community for ethical care and use of animals and how to use preserved or live animals appropriately in keeping with the age of students and the need for such materials.	Adherence to the standards of the science education community for ethical care and use of animals and knowledge of how to use preserved or live animals appropriately in keeping with the age of students and the need for such materials are unusually thorough and conscientious.

**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 use 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 use 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 limited 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 limited or no ability to critique & use hardware & software based on students' learning needs	Adequately critiques & uses hardware & software based on students' learning needs	Highly individualizes hardware/ software content & students' use 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 & use 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 use 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 limited skilled use 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 limited 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 –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 use 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 use 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 use 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 demonstrate application of strong critical thinking skills
Use of technology in research	Demonstrates minimal familiarity with a range of technological resources that support educational inquiry and use 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 use of technology when conducting research in education is highly appropriate and effective

**SECONDARY SCIENCE 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 limited 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.
Community of learners	Displays limited understanding of the concept of a community of learners, rarely interacts with instructors and peers as a colleague, and/or design of opportunities for a community of learners in science teaching is inadequate.	Understands the concept of a community of learners, interacts with instructors and peers as a colleague, and creates opportunities for a community of learners in science teaching.	Displays strong understanding of the concept of a community of learners, interacts enthusiastically with instructors and peers as a colleague, and design of opportunities for a community of learners in science teaching is proactive and highly effective.
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 limited, 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 use 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 show 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 show 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 SCIENCE 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 limited 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	Use 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	Attempts to seek document personal strengths and weaknesses and/or seek opportunities to engage in professional development and inform one's professional perspectives on teaching and learning and enhance classroom practice (e.g., consulting professional literature and colleagues) are limited	Documents personal strengths and weaknesses and seeks opportunities to engage in professional development and inform one's professional perspectives on teaching and learning and enhance classroom practice (e.g., 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., actively seeking out professional literature, participating in workshops and conferences, and consulting with colleagues)
Professional Activities	Participation in student associations, workshops and activities related to science teaching and/or reading of journals of professional associations in the field is limited or reluctant.	Participates in student associations, workshops and activities related to science teaching and reads journals of professional associations in the field.	Participation in student associations, workshops and activities related to science teaching and reading of journals of professional associations in the field are unusually strong and proactive.

**SECONDARY SCIENCE 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
Professional Responsibility	Personal responsibility for one's own professional growth and/or for assisting peers and colleagues to develop high quality learning experiences in science is limited or reluctant.	Takes personal responsibility for one's own professional growth and for assisting peers and colleagues to develop high quality learning experiences in science.	Personal responsibility for one's own professional growth and for assisting peers and colleagues to develop high quality learning experiences in science is exceptionally strong and proactive
Professional Integrity	Ability to handle problems and tension calmly and effectively and/or to relate to peers, instructors and supervisors with integrity and respect is limited.	Demonstrates the ability to handle problems and tension calmly and effectively, and to relate to peers, instructors and supervisors with integrity and respect.	Ability to handle problems and tension calmly and effectively and to relate to peers, instructors and supervisors with integrity and respect is exceptionally sensitive, thoughtful, and professional.