

FOUNDATION SKILLS: MATHEMATICS

Mathematics courses will provide a rigorous mathematical curriculum applied to real world problem solving

Criteria	Exceeds Expectations (3)	Meets Expectations (2)	Fails to Meet Expectations (1 or 0)
Construct and analyze arguments using mathematical logic.	The student demonstrates conceptual understanding and presents arguments without logical flaws.	The student demonstrates an understanding of the “big picture”; the student’s work may contain limited algebraic or notational errors.	The student does not demonstrate an understanding of the question, makes awkward or inconsistent logical statements, or provides disconnected ideas.
Identify a mathematical model’s underlying assumptions and assess its appropriateness for real-world applications.	The student goes beyond the obvious assumptions, and/or demonstrates a deeper understanding of the model in its physical context	The student is able to identify key assumptions in the model and discuss their feasibility in a real-world context.	The student displays little or no understanding of the mathematical model or its underlying assumptions.
Demonstrate the ability to perform mathematical procedures to solve problems.	The student’s work demonstrates appropriate procedures and notation.	The student shows an understanding of the question and selects the correct formula or process; the solution may contain minimal extraneous steps or statements, arithmetic errors, or insufficient supporting evidence.	The student minimally displays an ability to start the solution process; the student may write the correct first step but with little understanding of how to proceed.
Draw appropriate inferences from mathematical models used in social sciences, natural sciences, business, and everyday life.	Given a mathematical model, a student will be able to draw appropriate inferences and support his/her claims with sound reasoning.	Given a mathematical model, a student will be able to draw inferences and support his/her claims with reasoning that may include minor computational errors or logical flaws.	Given a mathematical model, a student is unable to connect the model to the context of the problem in a meaningful manner.
Interpret, communicate, and represent mathematical thinking in a precise and accurate manner using the language, tools, and symbolism of mathematics.	The student uses correct mathematical terminology and notation consistently; the student’s work reflects precision and attention to detail.	The majority of the time the student uses correct mathematical terminology and notation; the student may make one or two minor errors due to omission or carelessness.	The student rarely or inconsistently uses correct mathematical terminology or notation.

