# Algebra I—Biology—Literature

# PERFORMANCE LEVEL DESCRIPTORS—JULY 2011

| | Basic | Proficient | Advanced |
|---|---|---|---|
| Algebra I | **An Algebra I student performing at this level solves simple mathematical problems by applying fundamental skills and procedures in Algebra I.**<br><br>Students performing at this level demonstrate these abilities by identifying and simplifying operations with real numbers and expressions and by solving and graphing simple linear equations and linear inequalities. They identify solutions of simple linear systems of equations (including solving by graphing) and inequalities, and they identify characteristics of functions and writing equations of functions by substitution, including the use of coordinate geometry. Student use data analysis to answer fundamental questions. | **An Algebra I student performing at this level demonstrates an understanding of the skills, concepts, and procedures in Algebra I and is able to model and solve real-world problems.**<br><br>Students performing at this level demonstrate these abilities by simplifying, using properties, and performing operations with real numbers and expressions and by solving, graphing, writing, and interpreting linear equations and linear inequalities. Students solve linear systems of equations and interpret graphically linear systems of inequalities. They identify, use, describe, graph, write, and convert between multiple representations of functions, including the use of coordinate geometry. Students use data analysis to analyze, calculate, interpret, and make predictions. | **An Algebra I student performing at this level demonstrates an in-depth understanding of the skills, concepts, and procedures in Algebra I and is able to model, analyze, solve, and evaluate complex problems, including real-world problems.**<br>Students performing at this level demonstrate these abilities by justifying the use of properties involving operations with real numbers and simplifying complex expressions and by justifying reasoning when solving complex linear equations and linear inequalities and interpreting the results. They write, solve, and graph linear systems of equations and inequalities and interpreting the results, and they interpret and make predictions using functions, including the use of coordinate geometry. Students use data analysis to analyze, calculate, interpret, and make predictions based on multiple sets of data. |
| Biology | **A Biology student performing at this level demonstrates a partial conceptual understanding of science content and the application of skills and processes related to biological concepts.**<br><br>Students performing at this level demonstrate these abilities by recognizing scientific thinking, tools, and technologies in the study of biology. They identify the chemical basis and characteristics of life, and they recognize a simple structure and function relationship within a level of biological organization. Students define homeostasis and cellular transport, and they identify basic energy transformations in photosynthesis and cellular respiration. They recognize the steps of the cell cycle and the mechanisms and patterns of inheritance. Students use scientific processes to identify evidence that can describe evolutionary theory, and they recognize ecological organization and fundamental interactions within the biosphere. | **A Biology student performing at this level demonstrates a general conceptual understanding of science content and the application of skills and processes related to biological concepts.**<br><br>Students performing at this level demonstrate these abilities by applying scientific thinking, processes, tools, and technologies in the study of biology. They describe the chemical basis and characteristics of life and the relationships between structure and function at various levels of biological organization. Students explain mechanisms involved in homeostasis and cellular transport, and they describe the energy transformations in photosynthesis and cellular respiration. They compare the processes of mitosis and meiosis, and they describe how genetic information can be inherited, expressed, and altered. Students apply scientific processes to analyze evidence that can explain the mechanisms of evolutionary theory, and they describe ecological organization, biotic and abiotic components, and interactions within the biosphere. | **A Biology student performing at this Level demonstrates a thorough conceptual understanding of science content and the application of skills and processes related to biological concepts.**<br><br>Students performing at this level demonstrate these abilities by evaluating the application of scientific reasoning, inventions, tools, and new technologies in the study of biology. They analyze the chemical basis and characteristics of life, and they make predictions based on relationships between structure and function at various levels of biological organization. Students recognize and interpret connections between life processes such as homeostasis, cellular transport, photosynthesis, and cellular respiration and their inter-related effects on organisms. They evaluate the processes and outcomes of mitosis and meiosis, and they predict how genetic information could be inherited, expressed, and altered. Students apply scientific processes to interpret evidence that can explain the mechanisms of evolutionary theory, and they explain ecological interdependencies and cause and effect relationships within the biosphere. |
| Literature | **A Literature student performing at this level demonstrates some use of reading strategies to comprehend fiction and nonfiction.**<br><br>Students performing at this level consistently demonstrate a partial understanding of fiction and nonfiction within and between texts. They use limited reading skills and strategies to construct meaning. Students demonstrate comprehension through the use of word meanings, contextual clues, and literary terms. They demonstrate some understanding of text structures and the content of graphics. Students identify and explain the author's purpose and techniques. | **A Literature student performing at this level demonstrates a consistent use of effective reading strategies to comprehend fiction and nonfiction.**<br><br>Students performing at this level consistently demonstrate an adequate understanding of fiction and nonfiction within and between texts. They construct meaning by applying appropriate reading strategies and knowledge of literary terms, structures, and genres. Students make and support reasonable assertions and draw conclusions based on textual and contextual evidence. They analyze the author's purpose and techniques, including the effects on the reader. | **A Literature student performing at this level demonstrates a thorough use of sophisticated reading strategies to comprehend fiction and nonfiction.**<br><br>Students performing at this level consistently demonstrate a thorough understanding of fiction and nonfiction. They use in-depth knowledge of literature to construct original interpretations, draw insightful conclusions, and make connections within, between, and beyond texts. Students demonstrate subtle literary and conceptual understanding of texts and analyze the contexts in which they were written. They demonstrate a sophisticated understanding of style, structure, genre, and purpose. |