Achievement Level Descriptors

for

Grade 7 Science

Georgia Department of Education
September 2015

Achievement Levels and Achievement Level Descriptors

With the implementation of the Georgia Milestones Assessment System, Georgia educators have developed four achievement levels to describe student mastery and command of the knowledge and skills outlined in Georgia's content standards. Most students have at least some knowledge of the content described in the content standards; however, achievement levels succinctly describe how much mastery a student has. Achievement levels give meaning and context to scale scores by describing the knowledge and skills students must demonstrate to achieve each level.

The four achievement levels on Georgia Milestones are *Beginning Learner, Developing Learner, Proficient Learner,* and *Distinguished Learner.* The general meaning of each of the four levels is provided below:

Beginning Learners **do not yet demonstrate proficiency** in the knowledge and skills necessary at this grade level/course of learning, as specified in Georgia's content standards. The students ***need substantial academic support*** to be prepared for the next grade level or course and to be on track for college and career readiness.

Developing Learners **demonstrate partial proficiency** in the knowledge and skills necessary at this grade level/course of learning, as specified in Georgia's content standards. The students ***need additional academic support*** to ensure success in the next grade level or course and to be on track for college and career readiness.

Proficient Learners **demonstrate proficiency** in the knowledge and skills necessary at this grade level/course of learning, as specified in Georgia's content standards. The students ***are prepared*** for the next grade level or course and are on track for college and career readiness.

Distinguished Learners **demonstrate advanced proficiency** in the knowledge and skills necessary at this grade level/course of learning, as specified in Georgia's content standards. The students ***are well prepared*** for the next grade level or course and are well prepared for college and career readiness.

More detailed and content-specific concepts and skills are provided for each grade, content area, and course in the **Achievement Level Descriptors** (ALDs). ALDs are narrative descriptions of the knowledge and skills expected at each of the four achievement levels and were developed for each grade level, content area, and course by committees of Georgia educators in March 2015 and July 2015. The ALDs are based on the state-adopted content standards.

ALDs show a *progression of knowledge and skills* for which students must demonstrate competency across the achievement levels. It is important to understand that a student should demonstrate mastery of the knowledge and skills within his/her achievement level *as well as all content and skills in any achievement levels that precede his/her own, if any*. For example, a Proficient Learner should also possess the knowledge and skills of a Developing Learner *and* a Beginning Learner.

POLICY ALDs			
Beginning Learner	**Developing Learner**	**Proficient Learner**	**Distinguished Learner**
Beginning Learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level/course of learning, as specified in Georgia's content standards. The students need substantial academic support to be prepared for the next grade level or course and to be on track for *college and career readiness.*	**Developing Learners demonstrate partial proficiency in the knowledge and skills** necessary at this grade level/course of learning, as specified in Georgia's content standards. The students need additional academic support to ensure success in the next grade level or course and to be on track for *college and career readiness.*	**Proficient Learners demonstrate proficiency in the knowledge and skills** necessary at this grade level/course of learning, as specified in Georgia's content standards. The students are prepared for the next grade level or course and are on track for *college and career readiness.*	**Distinguished Learners demonstrate advanced proficiency in the knowledge and skills** necessary at this grade level/course of learning, as specified in Georgia's content standards. The students are well prepared for the next grade level or course and are well prepared for *college and career readiness.*
RANGE ALDs			
Beginning Learner	**Developing Learner**	**Proficient Learner**	**Distinguished Learner**
A student who achieves at the **Beginning Learner** level demonstrates minimal command of the grade-level standards. The pattern exhibited by student responses indicates that students are most likely able to • recognize that all living things are made of cells; • recognize that cell structures are related to their functions; • recognize that the human body has organs and different body systems; • define selective breeding; • recognize that the human body needs energy to grow and survive; • distinguish between plant and animal cells; • recognize that living things can	A student who achieves at the **Developing Learner** level demonstrates partial command of the grade-level standards. The pattern exhibited by student responses indicates that students are most likely able to • identify cell structures (cell membrane, nucleus, cytoplasm, chloroplasts, mitochondria) and define basic cell functions; • recognize that selective breeding can produce plants or animals with desired traits; • explain that cells are organized into tissues, tissues into organs, organs into systems, and systems into organisms; • explain asexual and sexual reproduction; • explain that physical characteristics of organisms	A student who achieves at the **Proficient Learner** level demonstrates proficiency of the grade-level standards. The pattern exhibited by student responses indicates that students are most likely able to • relate cell structures (cell membrane, nucleus, cytoplasm, chloroplasts, mitochondria) to basic cell functions; • explain that cells take in nutrients to grow, divide, and make needed materials as well as the removal of waste; • explain the role of genes and chromosomes in the process of inheriting a specific trait; • explain the purpose of the major organ systems in the human body (digestion, respiration, reproduction,	A student who achieves at the **Distinguished Learner** level demonstrates advanced proficiency of the grade-level standards. The pattern exhibited by student responses indicates that students are most likely able to • differentiate between tissues, organs, and organ systems and the ability to serve the needs that cells have for oxygen, food, and waste removal; • explain how the structure of a cell allows for the intake of nutrients as well as the removal of wastes; • analyze how species on Earth have evolved due to natural selection; • analyze how different characteristics of terrestrial

be classified into different groups; • recognize that fossils provide evidence of once living organisms; • recognize that organisms need energy to survive; • demonstrate knowledge of the correct procedures for the use of scientific equipment; • use appropriate technology to store and retrieve scientific information; • recognize tools that are used for measurement in scientific investigations; • recognize that some parts of a system are related to other parts of that same system; • recognize that models are used to represent relationships; • recognize different displays of scientific data; • recognize that lack of reasoning can result in poorly designed investigations; and • recognize that theories change as additional evidence is acquired.	have changed over successive generations; • explain that sunlight is the source of energy in a food web; • recognize that environmental changes affect the survival of both individuals and species; • list the different biomes; • describe different types of relationships between organisms (competitive, mutual benefit); • explain the difference between producers, consumers, and decomposers; • recognize the value of a hypothesis; • organize scientific information using charts, tables, graphs, and diagrams; • evaluate techniques to demonstrate the appropriate use of laboratory equipment; • analyze scientific data by using, interpreting, and comparing numbers; • draw conclusions based on analyzed data; • evaluate the use of scientific tools used for measuring; • recognize that different models are used to represent different concepts; and • investigate the value of arguments based on limited data, biased sampling, and	circulation, excretion, movement, control, coordination, protection from disease); • classify organisms based on physical characteristics using a dichotomous key of the six kingdom system (archaebacteria, eubacteria, protists, fungi, plants, animals); • explain how the process of selective breeding produces organisms with desired traits; • demonstrate the process for the development of a dichotomous key; • explain that trace evidence in the fossil record found in sedimentary rock provides evidence for the long history of changing life forms; • use a food web to demonstrate that matter is transferred from one organism to another and that matter can be recycled between organisms and their environments; • explain how energy moves from organism to organism in a food web; • explain how environmental conditions can affect the survival of both individuals and entire species; • categorize relationships between organisms as either	biomes and aquatic communities can impact the survival of different species; • assess how environmental changes affect survival of species • compare and contrast organisms that reproduce asexually and sexually (bacteria, protists, fungi, plants, animals); • correlate real-world applications of asexual reproduction, sexual reproduction, and selective breeding; • draw conclusions of specific traits based on inherited genes and chromosomes; • evaluate how the interdependence of organ systems allows organisms to sustain life; • predict the impact of changes to a food web; • predict how a species would evolve due to natural selection based on environmental changes; • cite evidence for classifying organisms into one of the six (6) kingdoms; • evaluate demonstrated laboratory procedures for safety; • evaluate the accuracy and

	samples that lack a control.	competitive or mutually beneficial; • describe the characteristics of Earth's major terrestrial biomes (tropical rainforest, savannah, temperate, desert, taiga, tundra, mountain); • describe the characteristics of Earth's aquatic communities (i.e., freshwater, estuaries, marine); • analyze the protocol for identifying and reporting safety violations during laboratory and field investigations; • use the mean, median, and mode to analyze numeric data; • calculate metric conversions; • use computation and estimation skills to analyze data; • analyze the use of scientific tools and instruments; • develop and analyze models used to represent scientific concepts; and • analyze step-by-step instructions for scientific investigations.	precision of collected scientific data; • analyze the use of models to demonstrate scientific concepts; and • evaluate the interpretation of scientific data.

