Achievement Level Descriptors

for

Grade 6 Science

Georgia Department of Education
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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 • identify objects in the Solar System; • recognize the differences between planets, moons, and solar systems; • identify which planets can support life; • recognize that the Big Bang is a scientific theory; • recognize changes in the Moon's appearance throughout a month; • recognize that Earth is made of layers;	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 the difference between geocentric and heliocentric theories; • list the planets in order from the Sun; • list the following in order from largest to smallest: universe, galaxy, solar system, sun, planet; • explain the Big Bang theory; • explain the difference between rotation and revolution; • identify gravity as a force that affects Earth and other objects in the sky;	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 • describe and explain the evidence supporting the heliocentric model as the currently accepted model; • describe the position of the Solar System in the Milky Way galaxy and the universe; • compare and contrast the planets, relative to Earth, in terms of size and surface and atmospheric features that support life; • describe and explain the evidence supporting the Big Bang theory;	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 • relate the nature of science to the progression of basic historical scientific models (geocentric, heliocentric) as they describe the Solar System; • relate the nature of science to the Big Bang theory as it describes the formation of the universe; • explain why solar and lunar eclipses do not occur every time there is a full and/or new moon;

• recognize that there are different types of rocks and minerals on Earth; • recognize that gravity attracts objects to Earth; • recognize that Earth's surface changes; • list the phases of the Moon in order; • identify different types of soil; • list parts of the water cycle; • recognize that water moves in the ocean; • identify the names and locations of Earth's oceans; • identify different types of weather; • recognize standard safety practices for all types of classroom laboratory and field investigations; • use scientific data to form scientific explanations; • recognize tools and instrumentation for observing and measuring in scientific investigations; • recognize the ideas of systems, models, change, and scale in exploring scientific and technological matters; • communicate scientific ideas in text; • recognize scientific claims; • recall the processes of scientific inquiry;	• identify the characteristics that are needed to support life; • relate the tilt of Earth to the distribution of sunlight throughout the year; • identify each of Earth's layers based on its characteristics; • investigate the contribution of minerals to rock composition; • classify rocks by their process of formation; • describe processes that change rocks and the surface of Earth; • recognize that lithospheric plates move; • explain that fossils provide information about the past; • describe soil as consisting of weathered rocks and decomposed organic material; • identify renewable and nonrenewable resources; • explain that a large portion of Earth's surface is water, consisting mostly of ocean water; • explain the role of the Sun as the major source of energy; • explain each part of the water cycle; • describe the composition and location of the world's oceans; • explain the causes of surface waves; • recognize that land and water absorb and lose heat differently;	• explain the motion of objects in the day/night sky in terms of relative position; • explain how gravity is a force that governs motion in the Solar System; • describe the characteristics of comets, asteroids, and meteors; • compare and contrast comets, asteroids, and meteors; • demonstrate the phases of the Moon by showing the alignment of Earth, the Moon, and the Sun; • explain the alignment of Earth, the Moon, and the Sun during solar and lunar eclipses; • explain how distribution of sunlight throughout the year affects climate; • compare and contrast Earth's crust, mantle, and core, including temperature, density and composition; • distinguish between the processes that change rocks and the surface of Earth; • describe the movement at each of the plate boundaries that causes major geological events on Earth's surface; • describe how fossils show evidence of the changing surface and climate of Earth;	• explain the effects of physical processes (plate tectonics, erosion, deposition, volcanic eruption, gravity) on geological features, including oceans (composition, currents, tides); • evaluate the ideas of systems, models, change, and scale in exploring scientific and technological matters; • evaluate scientific claims; and • explain that the majority of fresh water is frozen.

• recognize that water covers a large portion of Earth's surface; • recognize that water moves in different forms (e.g., currents, waves); and • distinguish a rock from and a mineral.	• identify which storms occur on land verses over water; • comprehend standard safety practices for all types of classroom laboratory and field investigations; • analyze scientific data; • use scientific tools and instrumentation in scientific investigations; • use the ideas of systems, models, change, and scale in exploring scientific and technological matters; • communicate scientific ideas in text, tables, charts, and diagrams; • investigate scientific claims; • recognize the process of scientific inquiry. • recognize that rocks are made of minerals; • identify the three types of rocks; • recognize that comets, asteroids, and meteors exist; and • recognize that gravitational attraction between Earth and the Moon has the greatest effect on tides.	• explain the relationship between the location and composition of Earth's oceans; • describe the composition of each of the horizons in soil; • describe methods for conserving natural resources such as water, soil, and air; • explain the effects of human activity on the erosion of Earth's surface; • relate various atmospheric conditions to phases of water; • relate how moisture evaporating from the oceans affects weather patterns and weather events such as hurricanes; • explain how unequal heating of land and water affects weather patterns including tornados and thunderstorms; • use standard safety practices for all classroom laboratory and field investigations; • use computational and estimation skills to analyze data and form scientific explanations; • use tools and instrumentation for observing and measuring in scientific investigations; • utilize the ideas of systems, models, change, and scale in exploring scientific and technological matters;	

		• communicate scientific ideas and activities clearly and accurately; • question scientific claims and arguments effectively; • investigate the features of scientific inquiry; • explain that a large part of Earth's surface is water consisting mostly of ocean water with the remaining portions distributed among rivers, lakes, underground water, and ice; • determine how wind and other factors will most likely affect ocean waves; • predict how changes in gravitational attraction between Earth and the Moon affect tides; and • explain that temperature and salinity differences cause deep and surface currents.	

