

Achievement Level Descriptors

for

Grade 5 Science

Georgia Department of Education
Spring 2018
All Rights Reserved

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 post-secondary 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 post-secondary 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 post-secondary 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 post-secondary 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 July 2017 and March 2018. 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 the student's achievement level *as well as all content and skills in any achievement levels that precede the student's own, if any*. For example, a Proficient Learner should also possess the knowledge and skills of a Developing Learner *and* a Beginning Learner.

 All Rights Reserved

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 *post-secondary 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 *post-secondary 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 *post-secondary 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 *post-secondary readiness.*
RANGE ALDs				
Standard	**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	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	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	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
Earth Science				
S5E1a S5E1b S5E1c	• identify surface features of Earth; • explain that changes in surface features are/were caused by constructive and/or destructive processes; • recognize that technology is used to limit and/or predict the impact of constructive and destructive processes	• recognize an argument supported by evidence to identify surface features of Earth as being caused by constructive or destructive processes; • recognize simple models used to collect data that illustrate how changes in surface features are/were caused by constructive and/or destructive processes; • explain that technology is used to limit and/or predict	• construct an argument with evidence to identify surface features of Earth (deltas, sand dunes, mountains, volcanoes) as being caused by constructive or destructive processes; • develop simple interactive models to collect data that illustrate how changes in surface features are/were caused by constructive and/or destructive processes; • ask questions to obtain information on how	• analyze and compare evidence of surface features of Earth to describe how they are caused by constructive or destructive processes; • develop complex interactive models to collect data that illustrate how changes in surface features are/were caused by constructive and/or destructive processes; • analyze and compare how different forms of technology are used to limit and/or predict the impact of

 All Rights Reserved

		the impact of constructive and destructive processes	technology is used to limit and/or predict the impact of constructive and destructive processes	constructive and destructive processes
Physical Science				
S5P1a S5P1b S5P1c S5P2a S5P2b S5P2c S5P3a S5P3b	• recognize physical changes in objects or substances; • recognize that water can change state; • recognize evidence that can be used to prove that a chemical change occurred to a substance; • recognize the difference between naturally occurring electricity (static) and human-harnessed electricity; • identify the components of a simple circuit; • identify a conductor and/or an insulator of electricity; • recognize a difference between an electromagnet and a magnet; • select an example that correctly shows the interaction between a magnetic field and a magnetic object	• identify investigations that can be used to explore physical changes by manipulating, separating and mixing dry and liquid materials; • recognize the physical changes in the state of water are due to temperature changes; • recognize an investigation that could be used to determine if a chemical change occurred based on observable evidence; • explain the difference between naturally occurring electricity (static) and human-harnessed electricity; • design a complete, simple circuit; • identify whether common materials are insulators or conductors of electricity; • recognize the differences in function and purpose of an electromagnet and a magnet; • describe the interaction between a magnetic field and a magnetic object	• plan and carry out investigations of physical changes by manipulating, separating and mixing dry and liquid materials; • construct an argument based on observations to support a claim that the physical changes in the state of water are due to temperature changes, which cause small particles that cannot be seen to move differently; • plan and carry out an investigation to determine if a chemical change occurred based on observable evidence (color, gas, temperature change, odor, new substance produced); • obtain and combine information from multiple sources to explain the difference between naturally occurring electricity (static) and human-harnessed electricity; • design a complete, simple electric circuit, and explain all necessary components; • plan and carry out investigations on common materials to determine if	• refine investigations of physical changes; • evaluate claims to determine which one(s) best support(s) an argument that the physical changes in the state of water are due to temperature changes; • refine an investigation used to determine if a chemical change occurred based on observable evidence; • analyze information from multiple sources to explain the difference between naturally occurring electricity (static) and human-harnessed electricity; • refine investigations that use common materials to determine if they are insulators or conductors of electricity; • analyze an argument based on experimental evidence to determine if it accurately communicates the differences in function and purpose of an electromagnet and a magnet; • refine an investigation used to observe the interaction between a magnetic field and a magnetic object

 All Rights Reserved

			they are insulators or conductors of electricity; • construct an argument based on experimental evidence that communicates the differences in function and purpose of an electromagnet and a magnet; • plan and carry out an investigation to observe the interaction between a magnetic field and a magnetic object	
Life Science				
S5L1a S5L1b S5L2a S5L2b S5L3a S5L3b S5L3c S5L4a S5L4b	• explain that plants and animals are sorted into groups based on their characteristics; • identify the difference between instincts and learned behaviors; • identify the difference between inherited and acquired physical traits; • recognize that cells are too small to be seen without magnification; • recognize a plant cell and an animal cell; • recognize that microorganisms play different roles in natural systems	• recognize a model that illustrates how animals are sorted into groups and how vertebrates are sorted into groups using data; • recognize a model that illustrates how plants are sorted into groups using data; • compare and contrast instincts and learned behaviors; • compare and contrast inherited and acquired physical traits; • identify how technology tools can be used to support a claim that plants and animals are comprised of cells too small to be seen without magnification; • identify and label the parts of a plant cell and an animal cell;	• develop a model that illustrates how animals are sorted into groups (vertebrate and invertebrate) and how vertebrates are sorted into groups (fish, amphibian, reptile, bird, and mammal) using data from multiple sources; • develop a model that illustrates how plants are sorted into groups (seed producers, non-seed producers) using data from multiple sources; • ask questions to compare and contrast instincts and learned behaviors; • ask questions to compare and contrast inherited and acquired physical traits; • gather evidence by utilizing technology tools to support a claim that plants and animals are comprised of cells too	• refine a model that illustrates how animals are sorted into groups and how vertebrates are sorted into groups using data from multiple sources of different types of data; • compare models that illustrate how plants are sorted into groups using data from multiple sources; • refine questions that can be used to compare and contrast instincts and learned behaviors; • refine questions to compare and contrast inherited and acquired physical traits; • analyze evidence collected utilizing technology tools to support a claim that plants and animals are comprised of cells too small to be seen without magnification;

 All Rights Reserved

		• compare the structures of plant and animal cells; • explain that some microorganisms are beneficial and some are harmful	small to be seen without magnification; • develop a model to identify and label parts of a plant cell (membrane, wall, cytoplasm, nucleus, chloroplasts) and of an animal cell (membrane, cytoplasm, and nucleus); • construct an explanation that differentiates between the structure of plant and animal cells; • construct an argument using scientific evidence to support a claim that some microorganisms are beneficial and some are harmful	• refine a model that shows the parts of a plant cell and of an animal cell; • refine an explanation that helps differentiates between the structure of plant and animal cells; • provide multiple examples of how microorganisms can be both beneficial and harmful to support a claim

 All Rights Reserved