

Grade 8 Science Performance Level Descriptors

Advanced: The student demonstrates superior performance on challenging subject matter. Consistent demonstration of a thorough understanding of science processes, knowledge, and reasoning required for applying core ideas in each of the major science disciplines of the physical, life, and earth/space sciences. A student performing at this level consistently and thoroughly demonstrates the ability to recognize and use scientific processes as defined by the Oklahoma Academic Standards (OAS). The student consistently and effectively can apply many different strategies for evaluating, organizing, analyzing, and synthesizing scientific data, information, and trends in order to solve non-routine problems that demand multi-step reasoning to justify a conclusion.

Proficient: The student demonstrates mastery of appropriate grade-level subject matter and is ready for the next grade or course of education as applicable. A general understanding of science processes, knowledge, and reasoning required for applying core ideas in each of the major science disciplines of the physical, life, and earth/space sciences, as well as the ability to apply their understanding to practical situations at a level appropriate to Grade 8 is evident. In addition to demonstrating a general understanding and application of the science skills at previous levels, a student performing at the Proficient level will predict and infer qualitative and quantitative changes including observations of the living and non-living world using International System of Units (SI), using appropriate tools; identify a scientific problem, devise and evaluate possible solutions, and choose the most appropriate solution; classify objects, organisms, and events based on chemical and taxonomic properties and/or observable properties and locations; recognize the components and evaluate the results of an experiment; use data (single and multiple sets) to: identify, construct, and interpret appropriate graph types (line, bar, and circle graphs); recognize or infer patterns in scientific data; apply the appropriate formula and/or calculations to solve density and motion problems; interpret data and communicate reasonableness of scientific explanations; and practice safety and recognize potential hazards in all science investigations.

Limited Knowledge: The student demonstrates partial mastery of the essential knowledge and skills appropriate to their grade level, as applicable. Knowledge and reasoning required for applying core ideas in each of the major science disciplines of the physical, life, and earth/space sciences at a level appropriate to Grade 8 is performed inconsistently in their work. Some gaps in knowledge and skills are evident and may require additional instruction in order to achieve a proficient level of understanding.

Unsatisfactory: The student does not perform at least at the Limited Knowledge level. A student in this range should be given comprehensive science instruction in order to achieve a Proficient level of understanding.