

Colorado Measures of Academic Success Grade 8 Science Performance Level Descriptors (PLDs)

Students demonstrate mastery of science concepts and 21st century skills aligned to the Colorado Academic Standards at various performance levels. The performance level descriptors are organized in a manner that assumes students demonstrating higher levels of command have mastered the concepts and skills within the lower levels. For example, a student at moderate command also masters the concepts and skills of limited command.

Students who Exceeded Expectations demonstrated distinguished command of the Colorado Academic Standards and can typically

- design an investigation to predict the movement of an object by examining the forces applied to it;
- use models to predict amounts of energy transferred;
- analyze data and models to support claims about genetic reproduction and traits of individuals;
- use observations and models to develop and communicate a weather prediction; and
- evaluate scientific theories and investigations that explain how the solar system was formed.

Students who Met Expectations demonstrated strong command of the Colorado Academic Standards and can typically

- use mathematical expressions and appropriate information from sources to describe the movement of an object;
- analyze different forms of energy and energy transfer using tools;
- construct an experiment to show mass is conserved;
- investigate the characteristics and behaviors of waves using models, technology, and basic rules of waves;
- analyze human impact on local ecosystems;
- use mathematics to predict the physical traits and genetic makeup of offspring; and
- relate tides, eclipses, lunar phases, and seasons to the motion and positions of the Sun, Earth, and the Moon, using the basic rules of the solar system.

Students who Approached Expectations demonstrated moderate command of the Colorado Academic Standards and can typically

- analyze speed and acceleration of moving objects;
- describe different forms of energy and energy transfer;
- use a variety of sources, including popular media and peer-generated explanations, to investigate and describe an environmental issue;
- analyze data and historical research for various weather conditions and compare to historical data for that date and location; and
- investigate and ask testable questions about Earth's different climates using various techniques.

Students who Partially Met Expectations demonstrated limited command of the Colorado Academic Standards and can typically

- distinguish between physical and chemical changes;
- recognize the relationship between pitch and frequency in sound;
- identify human activities that alter the ecosystem;
- recognize that genetic information is passed from one generation to the next;
- compare basic and severe weather conditions and develop an action plan for safety; and
- use tools and simulations to explore the solar system.