



State of Texas Assessments of Academic Readiness (STAAR™) Performance Level Descriptors Grade 8 Science

Performance Level Descriptors

Scientific investigation and reasoning skills are not assessed in isolation but are incorporated into questions that assess science content. These skills focus on safe, environmentally appropriate, and ethical laboratory and field investigations; using scientific methods and equipment in investigations; and using critical thinking, scientific reasoning, and problem solving to make informed decisions.

Students achieving Level III: Advanced Academic Performance can

- Interpret the role of valence electrons in the chemical reactivity of elements
- Apply the law of conservation of mass to a chemical equation
- Analyze relationships among force, motion, and energy
- Explain the electromagnetic spectrum and how it relates to components of the universe
- Analyze interdependence among organisms and their environments

Students achieving Level II: Satisfactory Academic Performance can

- Describe subatomic particles and their role in determining an element's identity and chemical properties
- Use physical and chemical properties to identify and classify elements on the periodic table
- Interpret chemical formulas and equations
- Apply Newton's laws of motion
- Relate tides, seasons, and lunar phases to the motion and position of the sun, Earth, and moon
- Describe components of the universe using observable data and models
- Analyze convection in oceans, in weather systems, and within the Earth
- Examine and evaluate the formation, weathering, and erosion of Earth's crustal features
- Describe interactions that occur within ecosystems, among organisms, and within organisms
- Recognize how environmental changes affect organisms
- Describe the role of genetic material in governing the inherited traits of organisms

Students achieving Level I: Unsatisfactory Academic Performance can

- Recognize components of atoms and the organization of elements on the periodic table
- Identify Newton's laws of motion
- Recognize that the sun is the primary energy source for Earth's ocean currents and weather systems
- Identify components of cells, organisms, and ecosystems