

Module Correlation Chart—Texas Essential Knowledge and Skills (TEKS)

Texas Essential Knowledge and Skills Correlation (TEKS)	Modules
(1) Scientific processes. The student, for at least 40% of instructional time, conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:	
(A) demonstrate safe practices during field and laboratory investigations; and	
(B) make wise choices in the use and conservation of resources and the disposal or recycling of materials.	
(2) Scientific processes. The student uses scientific methods during field and laboratory investigations. The student is expected to:	
(A) plan and implement investigative procedures including asking question, formulating testable hypotheses, and selecting equipment and technology;	
(B) collect data and make measurements with precision;	
(C) organize, analyze, evaluate, make inferences, and predict trends from data; and	
(D) communicate valid conclusions.	
(3) Scientific processes. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:	
(A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information.	
(B) draw inferences based on data related to promotional materials for products and services;	
(C) evaluate the impact of research on scientific thought, society, and the environment;	
(D) describe connections between physics and chemistry, and future careers; and	
(E) research and describe the history of physics, chemistry, and contributions of scientists.	
(4) Science concepts. The student knows concepts of force and motion evident in everyday life. The student is expected to:	
(A) calculate speed, momentum, acceleration, work, and power in systems such as in the human body, moving toys, and machines;	
(B) investigate and describe applications of Newton's laws such as in vehicle restraints, sports activities, geological processes, and satellite orbits;	
(C) analyze the effects caused by changing force or distance in simple machines as demonstrated in household devices, the human body, and vehicles; and	
(D) investigate and demonstrate mechanical advantage and efficiency of various machines such as levers, motors, wheels and axles, pulleys, and ramps.	

(5) Science concepts. The student knows the effects of waves on everyday life. The student is expected to:	
(A) demonstrate wave types and their characteristics through a variety of activities such as modeling with ropes and coils, activation tuning forks, and interpreting data on seismic waves;	
(B) demonstrate wave interactions including interference, polarization, reflection, refraction, and resonance within various materials;	
(C) identify uses of electromagnetic waves in various technological applications such as fiber optics, optical scanners, and microwaves; and	
(6) Science concepts. The student knows the impact of energy transformations in everyday life. The student is expected to:	
(A) describe the law of conservation of energy;	
(B) investigate and demonstrate the movement of heat through solids, liquids, and gases by convection, conduction, and radiation;	
(C) investigate and compare economic and environmental impacts of using various energy sources such as rechargeable or disposable batteries and solar cells;	
(E) measure thermal and electrical conductivity of various materials and explain results;	
(F) investigate and compare series and parallel circuits;	
(G) analyze the relationship between an electric current and the strength of its magnetic field using simple electromagnets; and	
(H) analyze the effects of heating and cooling processes in systems such as weather, living, and mechanical.	
(7) Science concepts. The student knows the relationships exist between properties of matter and in its components. The student is expected to:	
(A) investigate and identify properties of fluids including density, viscosity, and buoyancy;	
(B) research and describe the historical development of the atomic theory;	
(C) identify constituents of various materials or objects such as metal salts, light sources, fireworks displays, and stars using spectral-analysis techniques;	
(D) relate the chemical behavior of an element including bonding, to its placement on the periodic table; and	
(E) classify samples of matter from everyday life as being elements, compounds or mixtures.	
(8) Science concepts. The student knows that changes in matter affect everyday life. The student is expected to:	
(A) distinguish between physical and chemical changes in matter such as oxidation, digestion, changes in states, and stages in the rock cycle;	
(B) analyze energy changes that accompany chemical reactions such as those occurring in heat packs, cold packs, and glow sticks to classify them as endergonic or exergonic reactions;	
(C) investigate and identify the law of conservation of matter;	

(D) demonstrate how various factors influence solubility including temperature, pressure, and nature of the solute and solvent; and	
(E) demonstrate how factors such as particle size, influence the rate of dissolving.	