Grade 8 Science Assessed Curriculum for 2024-2025 ONLY

** For the 2024-2025 school year, ALL of the new TEKS must be taught; however, only the content that overlaps with the assessed curriculum prior to the implementation of the new TEKS will be assessed during this school year. In this document, the content in the black font is eligible to be assessed in the 2024-2025 school year.

Grade 8 Assessed Curriculum for the 2024-2025 School Year ONLY

Reporting Category 1: Matter and Energy

Old TEKS	Before 2024–2025	R/S	New TEKS	Implemented in 2024–2025	R/S
8.5A	describe the structure of atoms, including the masses, electrical charges, and locations, of protons and neutrons in the nucleus and electrons in the electron cloud;	Readiness			
8.5B	identify that protons determine an element's identity and valence electrons determine its chemical properties, including reactivity;	Readiness			
8.5C	interpret the arrangement of the Periodic Table, including groups and periods, to explain how properties are used to classify elements;	Readiness			
8.5D	recognize that chemical formulas are used to identify substances and determine the number of atoms of each element in chemical formulas containing subscripts; and	Readiness	7.6B	use the periodic table to identify the atoms and the number of each kind within a chemical formula;	Readiness
8.5E	investigate how evidence of chemical reactions indicates that new substances with different properties are formed and how that relates to the law of conservation of mass.	Readiness	8.6E	investigate how mass is conserved in chemical reactions and relate conservation of mass to the rearrangement of atoms using chemical equations, including photosynthesis.	Readiness
7.5B	diagram the flow of energy through living systems, including food chains, food webs, and energy pyramids.	Supporting	7.12A	diagram the flow of energy within trophic levels and describe how the available energy decreases in successive trophic levels in energy pyramids; and	Supporting
7.6A	distinguish between physical and chemical changes in matter.	Supporting	7.6C	distinguish between physical and chemical changes in matter;	Supporting

Reporting Category 1: Matter and Energy (Continued)

Old TEKS	Before 2024–2025	R/S	New TEKS	Implemented in 2024–2025	R/S
6.6A	compare metals, nonmetals, and metalloids using physical properties such as luster, conductivity, or malleability; and	Supporting	6.6C	identify elements on the periodic table as metals, nonmetals, metalloids, and rare Earth elements based on their physical properties and importance to modern life;	Supporting
6.6B	calculate density to identify an unknown substance.	Supporting	6.6D	compare the density of substances relative to various fluids; and	Supporting

Reporting Category 2: Force, Motion, and Energy

Old TEKS	Before 2024–2025	R/S	New TEKS	Implemented in 2024–2025	R/S
8.6A	demonstrate and calculate how unbalanced forces change the speed or direction of an object's motion;	Readiness	8.7A	calculate and analyze how the acceleration of an object is dependent upon the net force acting on the object and the mass of the object using Newton's Second Law of Motion; and	Readiness
			6.7B	calculate the net force on an object in a horizontal or vertical direction using diagrams and determine if the forces are balanced or unbalanced; and	Readiness
8.6B	differentiate between speed, velocity, and acceleration; and	Supporting			
8.6C	investigate and describe applications of Newton's three laws of motion such as in vehicle restraints, sports activities, amusement park rides, Earth's tectonic activities, and rocket launches.	Readiness	8.7B	investigate and describe how Newton's three laws of motion act simultaneously within systems such as in vehicle restraints, sports activities, amusement park rides, Earth's tectonic activities, and rocket launches.	Readiness
6.8A	compare and contrast potential and kinetic energy;	Supporting	6.8A	compare and contrast gravitational, elastic, and chemical potential energies with kinetic energy;	Supporting
6.8C	calculate average speed using distance and time measurements; and	Supporting	7.7A	calculate average speed using distance and time measurements from investigations;	Supporting
6.8D	measure and graph changes in motion.	Supporting	7.7C	measure (record) and interpret an object's motion using distance-time graphs;	Supporting
6.9C	demonstrate energy transformations such as energy in a flashlight battery changes from chemical energy to electrical energy to light energy.	Supporting	6.8B	describe how energy is conserved through transfers and transformations in systems such as electrical circuits, food webs, amusement park rides, or photosynthesis; and	Supporting

Reporting Category 3: Earth and Space

Old TEKS	Before 2024–2025	R/S	New TEKS	Implemented in 2024–2025	R/S
8.7A	model and illustrate how the tilted Earth rotates on its axis, causing day and night, and revolves around the Sun, causing changes in seasons;	Readiness	6.9A	model and illustrate how the tilted Earth revolves around the Sun, causing changes in seasons; and	Readiness
8.7B	demonstrate and predict the sequence of events in the lunar cycle; and	Readiness			
8.7C	relate the positions of the Moon and Sun to their effect on ocean tides.	Supporting	6.9B	describe and predict how the positions of the Earth, Sun, and Moon cause daily, spring, and neap cycles of ocean tides due to gravitational forces.	Supporting
8.8A	describe components of the universe, including stars, ~~–~~nebulae, and galaxies, and use models such as the Hertzsprung-Russell diagram for classification;	Readiness	8.9A	describe the life cycle of stars and compare and classify stars using the Hertzsprung-Russell diagram;	Readiness
8.8B	recognize that the Sun is a medium-sized star located in a spiral arm of the Milky Way galaxy and that the Sun is many thousands of times closer to Earth than any other star; and	Supporting	8.9B	categorize galaxies as spiral, elliptical, and irregular and locate Earth's solar system within the Milky Way galaxy; and	Supporting
8.8C	identify how different wavelengths of the electromagnetic spectrum such as visible light and radio waves are used to gain information about components in the universe.	Supporting	8.8B	explain the use of electromagnetic waves in applications such as radiation therapy, wireless technologies, fiber optics.	
8.9A	describe the historical development of evidence that supports plate tectonic theory;	Supporting	7.10A	describe the evidence that supports that Earth has changed over time, including fossil evidence, plate tectonics, and superposition; and	Supporting

Reporting Category 3: Earth and Space (Continued)

Old TEKS	Before 2024–2025	R/S	New TEKS	Implemented in 2024–2025	R/S
8.9B	relate plate tectonics to the formation of crustal features; and	Readiness	7.10B	describe how plate tectonics causes ocean basin formation, earthquakes, mountain building, and volcanic eruptions, including super volcanoes and hot spots.	Readiness
8.9C	interpret topographic maps and satellite views to identify land and erosional features and predict how these features may be reshaped by weathering.	Readiness			
8.10A	recognize that the Sun provides the energy that drives convection within the atmosphere and oceans, producing winds;	Supporting	8.10A	describe how energy from the Sun, hydrosphere, and atmosphere interact and influence weather and climate;	Supporting
8.10B	identify how global patterns of atmospheric movement influence local weather using weather maps that show high and low pressures and fronts; and	Supporting	8.10B	identify global patterns of atmospheric movement and how they influence local weather; and	Supporting
8.10C	identify the role of the oceans in the formation of weather systems such as hurricanes.	Supporting	8.10C	describe the interactions between ocean currents and air masses that produce tropical cyclones, including typhoons and hurricanes.	Supporting
7.8C	model the effects of human activity on groundwater and surface water in a watershed.	Supporting	7.11A	analyze the beneficial and harmful influences of human activity on groundwater and surface water in a watershed; and	Supporting
6.11B	understand that gravity is the force that governs the motion of our solar system.	Supporting	7.9B	describe how gravity governs motion within Earth's solar system; and	Supporting

Reporting Category 4: Organisms and Environments

Old TEKS	Before 2024–2025	R/S	New TEKS	Implemented in 2024–2025	R/S
8.11A	investigate how organisms and populations in an ecosystem depend on and may compete for biotic factors such as food and abiotic factors such as quantity of light, water, range of temperatures, or soil composition;	Readiness	6.12A	investigate how organisms and populations in an ecosystem depend on and may compete for biotic factors such as food and abiotic factors such as availability of light and water, range of temperatures, or soil composition;	Readiness
8.11B	explore how short- and long-term environmental changes affect organisms and traits in subsequent populations; and	Readiness			
8.11C	recognize human dependence on ocean systems and explain how human activities such as runoff, artificial reefs, or use of resources have modified these systems.	Supporting	7.11B	describe human dependence and influence on ocean systems and explain how human activities impact these systems.	Supporting
7.10B	describe how biodiversity contributes to the sustainability of an ecosystem; and	Supporting	8.12C	describe how biodiversity contributes to the stability and sustainability of an ecosystem and the health of the organisms within the ecosystem.	Supporting
7.10C	observe, record, and describe the role of ecological succession such as in a microhabitat of a garden with weeds.	Supporting	8.12B	describe how primary and secondary ecological succession affect populations and species diversity after ecosystems are disrupted by natural events or human activity; and	Supporting
7.11A	examine organisms or their structures such as insects or leaves and use dichotomous keys for identification; and	Supporting			
7.11C	identify some changes in genetic traits that have occurred over several generations through natural selection and selective breeding such as the Galapagos Medium Ground Finch (Geospiza fortis) or domestic animals and hybrid plants.	Supporting	7.13D	describe and give examples of how natural and artificial selection change the occurrence of traits in a population over generations.	Supporting
			8.13C	describe how variations of traits within a population lead to structural, behavioral, and physiological adaptations that influence the likelihood of survival and reproductive success of a species over generations.	Supporting

Reporting Category 4: Organisms and Environments (Continued)

Old TEKS	Before 2024–2025	R/S	New TEKS	Implemented in 2024–2025	R/S
7.12B	identify the main functions of the systems of the human organism, including the circulatory, respiratory, skeletal, muscular, digestive, excretory, reproductive, integumentary, nervous, and endocrine systems;	Supporting	7.13A	identify and model the main functions of the systems of the human organism, including the circulatory, respiratory, skeletal, muscular, digestive, urinary, reproductive, integumentary, nervous, immune, and endocrine systems;	Supporting
7.12D	differentiate between structure and function in plant and animal cell organelles, including cell membrane, cell wall, nucleus, cytoplasm, mitochondrion, chloroplast, and vacuole; and	Supporting	8.13A	identify the function of the cell membrane, cell wall, nucleus, ribosomes, cytoplasm, mitochondria, chloroplasts, and vacuoles in plant or animal cells;	Supporting
7.12F	recognize the components of cell theory.	Supporting	6.13A	describe the historical development of cell theory and explain how organisms are composed of one or more cells, which come from pre-existing cells and are the basic unit of structure and function;	Supporting
7.14B	compare the results of uniform or diverse offspring from asexual or sexual reproduction; and	Supporting	7.13C	compare the results of asexual and sexual reproduction of plants and animals in relation to the diversity of offspring and the changes in the population over time; and	Supporting
7.14C	recognize that inherited traits of individuals are governed in the genetic material found in the genes within chromosomes in the nucleus.	Supporting	8.13B	describe the function of genes within chromosomes in determining inherited traits of offspring; and	Supporting
6.12D	identify the basic characteristics of organisms, including prokaryotic or eukaryotic, unicellular or multicellular, autotrophic or heterotrophic, and mode of reproduction, that further classify them in the currently recognized kingdoms.	Supporting	6.13B	identify and compare the basic characteristics of organisms, including prokaryotic and eukaryotic, unicellular and multicellular, and autotrophic and heterotrophic	Supporting