

Table 1
Reporting Categories and Performance Level Indicators for the EOC Physical Science Pilot Test

Reporting Category, Objective, and Subskill
<p>1.0 Force and Motion</p> <p>1.1 Distinguish between speed and velocity, given a scenario.</p> <p>1.2 Relate inertia, force, or action-reaction forces to Newton’s three laws of motion given an illustration or diagram.</p> <p>1.3 Distinguish between mass and weight, given examples using SI units.</p> <p>1.4 Identify simple machines, given illustrations.</p> <p>1.5 Interpret distance-time graphs for velocity or velocity-time graphs for acceleration.</p> <p>1.6 Calculate velocity, given distance and time; acceleration, given velocity and time; force, given mass and acceleration; work, given force and distance; or power, given work and time, using the provided formulas card.</p> <p>1.7 Distinguish among the three laws of motion, given a scenario.</p> <p>1.8 Choose the correct illustration that relates the effects of gravity on the motion of falling bodies, ocean tides or satellites.</p> <p>1.9 Recognize the simple machines found in a compound machine, given an illustration.</p> <p>1.10 Choose the correct scenario that illustrates the law of conservation of momentum.</p>
<p>2.0 Structure and Properties of Matter</p> <p>2.1 Select a pure substance, which is an element or a compound, from a list of choices.</p> <p>2.2 Identify a substance as a compound or mixture, given a description of the substance.</p> <p>2.3 Distinguish between the volume, shape and particle arrangement in the four phases of matter (solid, liquid, gas, and plasma).</p> <p>2.4 Distinguish among elements, compounds, solutions, colloids, and suspensions, given an example.</p> <p>2.5 Identify an element as a metal, nonmetal or metalloid using the periodic table.</p> <p>2.6 Identify the three major subatomic particles (protons, neutrons, and electrons) and their locations in the atom, given an illustration.</p> <p>2.7 Recognize symbols for common elements (H, He, Li, ...) or formulas for common compounds (i.e. H₂O, NaCl, CO₂, HCl, Fe₂O₃, C₆H₁₂O₆, NaOH), given a list.</p> <p>2.8 Calculate density, given mass and volume.</p> <p>2.9 Predict the behavior of an object in water, given its density.</p> <p>2.10 Identify the atomic number, atomic mass, number of protons, number of neutrons, and number of electrons in an atom of a given element, using the periodic table.</p> <p>2.11 Determine the effects of pressure, temperature, or volume on the behavior of gases, given a diagram. (Boyle’s law and Charles’s law)</p>

Table 6 (continued)
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3.0 Interactions of Matter
3.1 Determine whether a change is physical or chemical, given examples.
3.2 Identify the reactants and /or products in a chemical reaction, given a chemical equation.
3.3 Identify a substance as acidic, basic, or neutral, given its pH.
3.4 Select the reaction that is endothermic or exothermic, given the temperature change during the reaction.
3.5 Identify a chemical reaction as either synthesis, decomposition, single-replacement or double-replacement reactions, given examples.
3.6 Predict the effect of acid rain on people or the environment, given a scenario.
3.7 Demonstrate the law of conservation of mass in a chemical reaction by selecting the balanced equation.
3.8 Select the correct coefficient(s) to balance a given chemical equation.
4.0 Energy
4.1 Classify waves as transverse waves or longitudinal waves, given an illustration.
4.2 Identify wavelength, frequency and amplitude, given an illustration.
4.3 Determine the temperature scale used, given the boiling and/or freezing point of water.
4.4 Identify a wave interaction as reflection, diffraction, refraction, and interference, given an example.
4.5 Select characteristic(s) that best describe(s) sound or light.
4.6 Determine whether the transfer of thermal energy is conduction, convection or radiation, given an illustration.
4.7 Compare and contrast the four kinds of wave interactions (reflection, diffraction, refraction, and interference).
4.8 Calculate voltage, given resistance and current in a series circuit, given the formulas.
4.9 Distinguish between nuclear fission and nuclear fusion, given a scenario.
4.10 Select the statement that best describes the law of conservation of energy.
4.11 Calculate the amount of heat gained or lost by a substance, given the formula.