

State	Local	Indicator
S.HS.1.1.2	S.PS.1.1.1	The student actively engages in investigations, including developing questions, gathering and analyzing data, and designing and conducting research
		<i>Hypothesis</i> <i>Independent variables</i>
		<i>Dependent variables</i> <i>Constant Variables</i>
		<i>Data</i> <i>Observable</i>
		<i>Measurable</i> <i>Replicable</i>
		<i>Analyzing</i> <i>Evaluating</i>

State	Local	Indicator
S.HS.1.1.3	S.PS.1.1.2	The student actively engages in using technological tools and mathematics in their own scientific investigations.
		<i>Statistical data analysis</i> <i>Graphing data analysis</i>
		<i>Accuracy</i> <i>Precision</i>
		<i>Data</i>

State	Local	Indicator
S.HS.5.1.1	S.PS.1.1.4	The student understands technology is the application of scientific knowledge for functional purposes.
		<i>Technology</i> <i>Engineering</i>

State	Local	Indicator
S.HS.2B.1.1	S.PS.6.6.1	The student understands Newton's Laws and the variables of time, position, velocity, and acceleration can be used to describe the position and motion of particles.
		<i>velocity</i> <i>acceleration</i>
		<i>vectors</i> <i>speed</i>
		<i>force</i> <i>energy</i>
		<i>distance</i> <i>conserved</i>
		<i>inertia</i> <i>net force</i>

State	Local	Indicator
S.HS.2B.2.2	S.PS.6.6.2	The student understands the first law of thermodynamics states the total internal energy of a substance (the sum of all the kinetic and potential energies of its constituent molecules) will change only if heat is exchanged with the environment or work is done on or by the substance. In any physical interaction, the total energy in the universe is conserved.
		<i>Kinetic energy</i>
		<i>Gravitational Potential energy</i>
		<i>Mass</i>
		<i>Electric Potential energy</i>
		<i>Heat</i>
		<i>Temperature</i>
		<i>Convection</i>
		<i>Conduction</i>
		<i>Work</i>
		<i>Power</i>

State	Local	Indicator
S.HS.2B.3.2	S.PS.8.8.2	The students understands waves have energy and can transfer energy when they interact with matter.
		<i>Crest</i>
		<i>Trough</i>
		<i>Wavelength</i>
		<i>Frequency</i>
		<i>Amplitude</i>
		<i>Refraction</i>
		<i>Diffraction</i>
		<i>Interference</i>
		<i>Transverse Wave</i>
		<i>Compressional Wave</i>

State	Local	Indicator
S.HS.2B.3.5	S.PS.8.8.5	The student understands electromagnetic waves result when a charged particle is accelerated or decelerated.
		<i>Photon</i>
		<i>Cathode-ray tube</i>
		<i>X ray</i>
		<i>Gamma ray</i>
		<i>Ultraviolet waves</i>
		<i>Visible light</i>
		<i>Infrared wave</i>
		<i>Microwave</i>
		<i>Radiant energy</i>
		<i>Radio wave</i>

State	Local	Indicator
S.HS.4.1.2	S.8.9.1 & S.8.9.3	The student understands the theory of Plate Tectonics explains that internal energy drives the earth's ever changing structure.
		<i>Oceanic plates</i>
		<i>Mantle</i>
		<i>Radioactive decay</i>
		<i>Convection circulation</i>
		<i>Atom</i>
		<i>Element</i>
		<i>Nutrient cycle</i>
		<i>Biological</i>
		<i>Geological</i>

State	Local	Indicator
S.HS.4.3.2	S.8.7.3	The student understands the relationship between the earth, moon, and sun explains the seasons, tides and moon phases. <i>Angel of incidence</i> <i>Gravity</i>

State	Local	Indicator
S.HS.4.4.1	S.8.5.1	The student understands stellar evolution. <i>Condensation</i> <i>Life cycle</i> <i>Star</i> <i>Nebula</i> <i>Nuclear fusion</i> <i>H-R diagram</i> <i>Red shift</i> <i>Doppler effect</i> <i>Galaxies</i> <i>Universe</i>

State	Local	Indicator
S.HS.2A.1.1	S.PS.2.2.1	The student understands atoms, the fundamental organizational unit of matter, are composed of subatomic particles. Chemists are primarily interested in the protons, electrons, and neutrons found in the atom. <i>Atom</i> <i>Proton</i> <i>Neutron</i> <i>Electron</i> <i>Mass number</i> <i>Atomic number</i>

State	Local	Indicator
S.HS.2A.2.1	S.PS.2.2.1	The student understands chemists use kinetic and potential energy to explain the physical and chemical properties of matter on earth that may exist in any of these three states: solids, liquids, and gases. <i>Kenetic energy</i> <i>Potential energy</i> <i>solid</i> <i>liquid</i> <i>gas</i> <i>Physical change</i> <i>Chemical change</i> <i>Kenetic-Molecular Theory</i>

