Merritt Academy
Chemistry Standards
2015-2016 school year

MI Standard	Sub Standard	Description	month assessed
C1.1	C1.1	Scientific Inquiry	ALL
	C1.1A	Generate Questions that can be investigated	ALL
	C1.1B	Evaluate conclusions by analyzing data	ALL
	C1.1C	Conduct investigations using appropriate tools	ALL
	C1.1D	Identify patters in data and relate to models	ALL
	C1.1E	Describe a reason for a conclusion using evidence	ALL
C1.2	C1.2	Scientific Reflection and social Implications	ALL
	C1.2A	Critique if questions can be answered using science	ALL
	C1.2B	Identify arguments about personal or societal issues base on evidence	ALL
	C1.2C	Investigate multiple sources and evaluate scientific accuracy	ALL
	C1.2D	Evaluate scientific explanations in a peer review process	ALL
	C1.2E	Evaluate the future career and occupational prospects of science	ALL
C2.2	C2.2	Forms of Energy	B1
	C2.2A	Describe conduction in terms of molecules bumping into each other	B1
	C2.2B	Describe various states of matter in terms of motion and molecules	B1
C3.3	C3.3	Heating Impacts	B1
	C3.3A	Describe how heat is conducted in a solid	
	C3.3B	Describe melting on a molecular level	
C3.4	C3.4	Endothermic and Exothermic Reactions	B3
	C3.4A	Use the terms endothermic and exothermic correctly to describe chemical reactions	B3
	C3.4B	Explain why chemical reactions will either release or absorb energy	B3
C4.2	C4.2	Nomenclature	A3
	C4.2A	Name simple binary compounds using the formula	A3
	C4.2B	Given the name, write the formula of simple binary compounds	A3
C4.3	C4.3	Properties of Substances	B1
	C4.3A	Recognize that solid substances have stronger attractive forces than liquids at room temp	B1
	C4.3B	recognize that solids have more ordered, regular arrangement of particles than liquids and gases	B1
C4.8	C4.8	Atomic Structure	A1
	C4.8A	Identify the location, mass and charge for electrons, protons and neutrons	A1
	C4.8B	Describe the atom as mostly empty space with a small dense numcleus made of subatomic particles	A1
	C4.8C	Recognize that protons repel each other and that a strong force needs to be present to keep the nucleus intact	A1
	C4.8D	Give the number of electrons and protons present if the fluoride ion has a charge of -1	A1
C4.9	C4.9	Periodic Table	A2
	C4.9A	Identify elements with similar chemical and physical properties using the periodic table	A2
C4.10	C4.10	Neutral Atoms, Ions, Isotopes	A1
	C4.10A	List the number of protons, neutrons and electrons for any given ion or isotope	A1
	C4.10B	Recognize that an element always contains the same number of protons	A1
C5.2	C5.2	Chemical Changes	B2
	C5.2A	Balance simple chemical equations applying the conservation of matter	B2
	C5.2B	Distinguis between chemical and physical changes in terms of the properties of reactants and products	B2
	C5.2C	Draw pictures to distinguish the relationships beteen atoms in physical changes and chemical changes	B2
C5.4	C5.4	Phase Changes/Diagrams	B2
	C5.4A	Compare the energy required to raise the temp of 1 gram aluminum and one gram of water the same number of degrees	B2
	C5.4B	Meaure, plot, and interpret the graph of temp vrs time of water	B2
C5.5	C5.5	Chemical Bonds-Trends	A2
	C5.5A	Predict if the bonding between two atoms of different elements will be ionic or covalent	A2
	C5.5B	Predict the formula for binary compounds of main group elements	A2
C5.7	C5.7	Acids and bases	B3
	C5.7A	Recognize formulas for commom inorganic acids, carboxylic acids, and bases fromed from families I and II	B3
	C5.7B	Predict products of an acid-base neutralization	B3
	C5.7C	Describe tests that can be used to distinguish an acid from a base	B3
	C5.7D	Classify various solutions as acid or base given their pH	B3
	C5.7E	Explain why lakes with limestone or calcium carbonate experience less adverse effects from acid rain than lakes with granite beds	B3
C5.8	C5.8	Carbon Chemistry	A2
	C5.8A	Draw structural formulas for up to ten carbon changes of simple hydrocarbons	A2
	C5.8B	Draw isomers for simple hydrocarbons	A2
	C5.8C	Recognize that proteins, startches, and other large biological molecules are polymers.	A2

standards taken from:
https://www.michigan.gov/documents/CHEM_168212_7.pdf

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