Mastery Information			Comp./ Obj. #	DOK	**Pacing Guide** **Science – Seventh Grade**
Date	**+**	**-**			
					1. Design and conduct a scientific investigation utilizing appropriate process skills and technology.
					a. Design, conduct, and draw conclusions from an investigation that includes using experimental controls. (DOK 3)
					b. Discriminate among observations, inferences, and predictions. (DOK 1)
					c. Collect and display data using simple tools and resources to compare information (using standard, metric, and non-standard measurement). (DOK 2) • Tools (e.g., English rulers [to the nearest one-sixteenth of an inch], metric rulers [to the nearest millimeter], thermometers, scales, hand lenses, microscopes, balances, clocks, calculators, anemometers, rain gauges, barometers, hygrometers, telescopes, compasses, spring scales, pH indicators, stopwatches) • Types of data (e.g., linear measures, mass, volume, temperature, area, perimeter) • Resources (e.g., Internet, electronic encyclopedias, journals, community resources, etc.)
					d. Organize data in tables and graphs and analyze data to construct explanations and draw conclusions. (DOK 3)
					e. Communicate results of scientific procedures and explanations through a variety of written and graphic methods. (DOK 2)
					f. Explain how science and technology are reciprocal. (DOK 1)
					g. Develop a logical argument to explain why scientists often review and ask questions about the results of other scientists' work. (DOK 3)
					h. Make relationships between evidence and explanations. (DOK 2)

					2. Develop an understanding of chemical and physical changes, interactions involving energy, and forces that affect motion of objects.
					a. Identify patterns (e.g., atomic mass, increasing atomic numbers) and common characteristics (metals, nonmetals, gasses) of elements found in the periodic table of elements. (DOK 2)
					b. Categorize types of chemical changes, including synthesis and decomposition reactions, and classify acids and bases using the pH scale and indicators. (DOK 2)
					c. Compare the force (effort) required to do the same amount of work with and without simple machines (e.g., levers, pulleys, wheel and axle, inclined planes). (DOK 2)
					d. Describe cause and effect relationships of electrical energy. (DOK 2) • Energy transfers through an electric circuit (using common pictures and symbols) • Electric motor energy transfers (e.g., chemical to electrical to mechanical motion) and generators
					e. Distinguish how various types of longitudinal and transverse waves (e.g., water, light, sound, seismic) transfer energy. (DOK 2) • Frequency • Wavelength • Speed • Amplitude
					f. Describe the effects of unbalanced forces on the speed or direction of an object's motion. (DOK 2) • Variables that describe position, distance, displacement, speed, and change in speed of an object • Gravity, friction, drag, lift, electric forces, and magnetic forces

			5.C2.c	2	
			5.C2.d	3	
			5.C2.e	2	
			5.C3		
			5.C3.a	**3**	
			5.C3.b	**3**	
			5.C3.c	**3**	
			5.C3.d	**3**	
			5.C3.e	**3**	
			5.C3.f	**3**	
			5.C4		
			5.C4.a	**1**	

			54.C4.b	**1**	
			5.C4.c	**2**	