3rd Grade Science Lee's Summit Curriculum Year at a Glance

Engineering, Technology, and Application of Science *Engineering Standards should be ongoing and continually integrated into science lessons/units.* *Standards should be recorded in Q1, 2, 3* *The ETS standards are written as a 3-5 grade span end point. Therefore, by the end of grade 5, students should be proficient in these skills.*	**Physical Science** **Unit 1: Motion and Stability: Forces and Interactions** **Estimated Teaching Window: August-September** *Standards should be recorded in Q1*	**Physical Science** **Unit 2: Matter and Its Interactions** **Estimated Teaching Window: October-November** *Standards should be recorded in Q2*	**Life Science** **Unit 3: Heredity: Inheritance and Variations of Traits** **Estimated Teaching Window: November-December** *Standards should be recorded in Q2*
Essential Standard: Students will understand and use scientific and engineering practices to conduct investigations and solve problems. **Learning Targets:** ● Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. (MLS: 3.ETS1.A.1, NGSS: 3-5-ETS1-1) ● Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. (MLS: 3.ETS1.B.1, NGSS: 3-5-ETS1-2.) ● Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved. (MLS: 3.ETS1.C.1, NGSS: 3-5-ETS1-3)	**Essential Standard:** Students will investigate and understand the interactions of forces between objects and magnets. **Learning Targets:** ● Plan and conduct investigations to determine the cause and effect relationship of electric or magnetic interactions between two objects not in contact with each other. (MLS: 3.PS2.B.1, NGSS: 3-PS2-1) ● Define a simple design problem that can be solved by applying scientific ideas about magnets. (Not in MLS, NGSS: 3-PS2-4) **Essential Standard:** Students will understand and use scientific and engineering practices to conduct investigations and solve problems. **Learning Targets:** **Engineering, Technology, and Application of Science** ● Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. (MLS: 3.ETS1.A.1, NGSS: 3-5-ETS1-1) ● Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. (MLS: 3.ETS1.B.1, NGSS: 3-5-ETS1-2.) ● Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved. (MLS: 3.ETS1.C.1, NGSS: 3-5-ETS1-3)	**Essential Standard:** Students will demonstrate an understanding of the structures and properties of matter. **Learning Targets:** ● Predict and investigate that water can change from a liquid to a solid (freeze), and back again (melt), or from a liquid to a gas (evaporation), and back again (condensation) as the result of temperature changes. (MLS: 3.PS1.A.1, Not in NGSS) ● Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot. (MLS: 3.PS1.B.1, Not in NGSS) **Essential Standard:** Students will understand and use scientific and engineering practices to conduct investigations and solve problems. **Learning Targets:** **Engineering, Technology, and Application of Science** ● Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. (MLS: 3.ETS1.A.1, NGSS: 3-5-ETS1-1) ● Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. (MLS: 3.ETS1.B.1, NGSS: 3-5-ETS1-2.)	**Essential Standard:** Students will use evidence to support the explanation that traits can be inherited as well as influenced by the environment. **Learning Targets:** ● Construct scientific arguments to support claims that some characteristics of organisms are inherited from parents and some are influenced by the environment. (MLS: 3.LS3.A.1, Not in NGSS) ● Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving and finding mates. (MLS: 3.LS3.B1, NGSS: 3-LS4-2) ● Construct an argument with evidence that in a particular ecosystem some organisms — based on structural adaptations or behaviors — can survive well, some survive less well, and some cannot. (MLS: 3.LS3.C.1, NGSS: 3-LS4-3) ● Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change. (MLS: 3.LS3.D.1, NGSS: 3-LS4-4) **Essential Standard:** Students will understand and use scientific and engineering practices to conduct investigations and solve problems. **Learning Targets:** **Engineering, Technology, and Application of Science** ● Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. (MLS: 3.ETS1.B.1, NGSS: 3-5-ETS1-2.)

Life Science **Unit 4: From Molecules to Organisms: Structure and Processes of Plants and Animals** **Estimated Teaching Window: January-March** *Standards should be recorded in Q3*	**Earth & Space Science** **Unit 5: Earth's Systems: Weather and Climate** **Estimated Teaching Window: March-May** *Standards should be recorded in Q4*	
Essential Standard: Students will analyze and understand the traits and life cycles of plants and animals. **Learning Targets:** ● Develop a model to compare and contrast observations on the life cycle of different plants and animals. (MLS: 3.LS.B.1 NGSS: 3-LS1-1)	**Essential Standard:** Students will analyze and predict weather and climate patterns. **Learning Targets:** ● Identify patterns indicating relationships between observed weather data and weather phenomena (e.g., temperature and types of precipitation, clouds and amounts of precipitation). (MLS: 1.ESS2.D, Not in NGSS) ● Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. (MLS: 3.ESS2.D.1, NGSS: 3-ESS2-1) ● Obtain and combine information to describe climates in different regions of the world. (MLS: ESS2.D.2, NGSS: 3-ESS2-2)	