2nd 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 Q2,3,4* *The ETS standards are written as a K-2 grade span end point. Therefore, by the end of grade 2, students should be proficient in these skills.*	**Physical Science** **Unit 1: Matter and Its Interactions** **Estimated Teaching Window: September - November** *Standards should be recorded in Q2*	**Earth and Space Science** **Unit 2: Earth's Systems** **Estimated Teaching Window: December - February** *Standards should be recorded in Q3*	**Life Science** **Unit 3: Ecosystems: Interactions, Energy, and Dynamics** **Estimated Teaching Window: March - May** *Standards should be recorded in Q4*
Essential Standard: Students will understand and use scientific and engineering practices to conduct investigations and solve problems. **Learning Targets:** ● Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. (MLS: 2.ETS1.A.1, NGSS: K-2-ETS1-1) ● Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. (MLS: 2.ETS1.B1, NGSS: K-2-ETS1-2) ● Analyze data from tests of two objects designed to solve the same problem to compare the strength and weaknesses of how each performs. (MLS: 2.ETS1.C.1, NGSS: K-2-ETS1-3)	**Essential Standard:** Students will demonstrate an understanding of the structures and properties of matter. **Learning Targets:** ● Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. (MLS: 2.PS1.A.1, NGSS: 2-PS1-1) ● Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose. (MLS: 2.PS1.A.2, NGSS: 2-PS1-2) **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** ● Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. (MLS: 2.ETS1.B1, NGSS: K-2-ETS1-2) ● Analyze data from tests of two objects designed to solve the same problem to compare the strength and weaknesses of how each performs. (MLS: 2.ETS1.C1, NGSS: K-2-ETS1-3)	**Essential Standard:** Students will demonstrate an understanding of the processes that shape the Earth. **Learning Targets:** ● Use information from several sources to provide evidence that Earth events can occur quickly or slowly. (MLS: 2.ESS1.C.1, NGSS: 2-ESS1-1) ● Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land. (MLS: 2.ESS2.A.1, NGSS: 2-ESS2-1) ● Develop a model to represent the shapes and kinds of land and bodies of water in an area. (MLS: 2.ESS2.B.1, NGSS: 2-ESS2-2) ● Obtain information to identify where water is found on Earth and that it can be solid or liquid. (MLS: 2.ESS2.C.1, NGSS: 2-ESS2-3) **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** ● Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. (MLS: 2.ETS1.A.1, NGSS: K-2-ETS1-1) ● Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. (MLS: 2.ETS1.B.1, NGSS: K-2-ETS1-2) ● Analyze data from tests of two objects designed to solve the same problem to compare the strength and weaknesses of how each performs. (MLS: 2.ETS1.C.1, NGSS: K-2-ETS1-3)	**Essential Standard:** Students will demonstrate an understanding of the interdependence between plants and animals in their environments. **Learning Targets:** ● Plan and conduct investigations on the growth of plants when growing conditions are altered (e.g., dark versus light, water versus no water). (MLS: 2.LS2.A.1, NGSS: 2-LS2-1) ● Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants. (MLS: 2.LS2.A.2, NGSS: 2-LS2-2) **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** ● Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. (MLS: 2.ETS1.B1, NGSS: K-2-ETS1-2)