

## 1st Grade Science Lee's Summit Curriculum Year at a Glance

<p><b>Engineering, Technology, and Application of Science</b>  <i>Engineering Standards should be ongoing and continually integrated into science lessons/units.</i></p> <p style="text-align: center;"><i>Standards should be recorded in Q2, 3</i></p> <p><i>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.</i></p>	<p style="text-align: center;"><b>Life Science</b>  <b>Unit 1: Plants and Animals</b></p> <p style="text-align: center;"><b>Estimated Teaching Window: September-November</b>  <i>Standards should be recorded in Q2</i></p>	<p style="text-align: center;"><b>Physical Science</b>  <b>Unit 2: Energy (Light and Sound)</b></p> <p style="text-align: center;"><b>Estimated Teaching Window: January-February</b>  <i>Standards should be recorded in Q3</i></p>	<p style="text-align: center;"><b>Earth and Space Science</b>  <b>Unit 3: Sun, Moon, and Stars</b></p> <p style="text-align: center;"><b>Estimated Teaching Window: March-May</b>  <i>Standards should be recorded in Q4</i></p>
<p><b>Essential Standard:</b>            Students will understand and use scientific and engineering practices to conduct investigations and solve problems.</p> <p><b>Learning Targets:</b></p> <ul style="list-style-type: none"> <li>● 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: 1.ETS1.A, NGSS: K-2-ETS1-1)</li> <li>● 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: 1.ETS1.B, NGSS: K-2-ETS1-2)</li> <li>● Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. (MLS: 1.ETS1.C, NGSS: K-2-ETS1-3)</li> </ul>	<p><b>Essential Standard:</b>            Students will observe and understand the function of external structures of animals and plants in their life cycles including inheritance and variation of traits.</p> <p><b>Learning Targets:</b></p> <ul style="list-style-type: none"> <li>● Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs. (MLS: 1.LS1.A, NGSS: 1-LS1-1)</li> <li>● Make observations to construct an evidence based account that young plants and animals are like, but not exactly like, their parents. (MLS: 1.LS3.A, NGSS: 1-LS3-1)</li> </ul> <p><b>Essential Standard:</b>            Students will understand and use scientific and engineering practices to conduct investigations and solve problems.</p> <p><b>Learning Targets:</b></p> <p><b>Engineering, Technology, and Application of Science</b></p> <ul style="list-style-type: none"> <li>● 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: 1.ETS1.A, NGSS: K-2-ETS1-1)</li> <li>● 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: 1.ETS1.B, NGSS: K-2-ETS1-2)</li> <li>● Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. (MLS: 1.ETS1.C, NGSS: K-2-ETS1-3)</li> </ul>	<p><b>Essential Standard:</b>            Students will demonstrate an understanding of light and sound including their significance to communication.</p> <p><b>Learning Targets:</b></p> <ul style="list-style-type: none"> <li>● Plan and conduct investigations to provide evidence that vibrating materials can make sound, and that sound can make materials vibrate. (MLS: 1.PS4.A.1, NGSS: 1-PS4-1)</li> <li>● Plan and conduct investigations to provide evidence that changes in vibration create changes in sound. (MLS: 2.PS4.A.1, Not in NGSS)</li> <li>● Make observations to construct an evidence-based account that objects in darkness can be seen only when illuminated. (Not in MLS, NGSS: 1-PS4-2)</li> <li>● Plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light. (Not in MLS, NGSS: 1-PS4-3)</li> <li>● Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance. (MLS: 1.PS4.C.4, NGSS: 1-PS4-4)</li> </ul> <p><b>Essential Standard:</b>            Students will understand and use scientific and engineering practices to conduct investigations and solve problems.</p> <p><b>Learning Targets:</b></p> <p><b>Engineering, Technology, and Application of Science</b></p> <ul style="list-style-type: none"> <li>● 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: 1.ETS1.A, NGSS: K-2-ETS1-1)</li> <li>● 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: 1.ETS1.B, NGSS: K-2-ETS1-2)</li> <li>● Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. (MLS: 1.ETS1.C, NGSS: K-2-ETS1-3)</li> </ul>	<p><b>Essential Standard:</b>            Students will demonstrate an understanding of patterns and cycles of the Sun, Moon, and stars.</p> <p><b>Learning Targets:</b></p> <ul style="list-style-type: none"> <li>● Describe the presence of the Sun, Moon, and stars in the sky over time. (MLS: 1.ESS1.A.1, Not in NGSS)</li> <li>● Use observations of the Sun, Moon, and stars to describe patterns that can be predicted. (MLS: 1.ESS1.A.1, NGSS: 1-ESS1-1)</li> </ul>