








## 4-H LESSON TOPICS for 2009-2010

<u>LESSON TOPIC</u>	<u>MONTH OF TOPIC</u>	<u>Grade-Level (4<sup>th</sup>-12<sup>th</sup>) Expectations</u>
<p style="text-align: center;"><b>HURRICANE HAZARDS</b></p> 	<p style="text-align: center;"><b>OCTOBER –</b></p> <p>Students will gain an awareness of history, terminology, and effects of hurricanes, track a hurricane on a tracking chart &amp; be able to share preparation procedures for hurricane watches, warnings &amp; evacuations with family &amp; neighbors.</p>	<p>SI-E-B3: Choosing appropriate equipment and tools to conduct an Experiment.            SI-E-B4: Developing explanations by using observations and experiments.            SI-E-B6: Reviewing and asking questions about the results of investigations.            SI-M-A3: using mathematics and appropriate tools &amp; techniques to gather, analyze, and interpret data.            SI-M-A4: Developing descriptions, explanations, and graphs using data.            SI-M-A6: comparing alternative explanations and predictions.            SI-M-A7: communicating scientific procedures, information, &amp; explanations.            M-1-E: applying the concepts of length, area, volume, capacity, weight, mass, time, money &amp; temperature to real-world experiences.</p>
<p style="text-align: center;"><b>BLOOD AND GUTS</b></p> 	<p style="text-align: center;"><b>NOVEMBER –</b></p> <p>Students will identify human body organs and their placement and function in the human body.</p>	<p>SI-E-B6: Reviewing and asking questions about the results of investigations.            LS-M-A5: Investigating human body systems and their functions (including Circulatory, digestive, skeletal, respiratory).            SI-E-B6: Determine whether further investigations are needed to draw Conclusions.            SI-E-B6: Use evidence from previous investigations to ask additional questions and to initiate further explorations.            SI-E-B6: Explain and give examples of how scientific discoveries have affected Society.            LS-M-A5: Describe levels of structural organization in living things.</p>
<p style="text-align: center;"><b>THE WEB OF LIFE</b></p> 	<p style="text-align: center;"><b>DECEMBER –</b></p> <p>Students will identify plants, animals, and bacteria that make up an ecosystem and tell how each part of the ecosystem is interrelated with other parts of that environment.</p>	<p>SI-M-A7: communicating scientific procedures, information, &amp; explanations.            SI-M-B5: understanding that scientific knowledge is enhanced through peer review, alternative explanations, and constructive criticism.            LS-E-A1: Identify the needs of plants &amp; animals, based on age-appropriate recorded observations.            LS-M-C2: modeling and interpreting food chains and food webs.            LS-M-C4: explaining the interaction and interdependence of nonliving and living components within ecosystems.            SE-M-A1: demonstrating knowledge that an ecosystem includes living &amp; nonliving factors and that humans are an integral part of ecosystems.            SE-M-A9: demonstrating relationships of characteristics of soil types to agricultural practices and productivity.</p>
<p style="text-align: center;"><b>GO WITH THE FLOW</b></p> 	<p style="text-align: center;"><b>JANUARY–</b></p> <p>Students will discover that electricity must have a path for electrons to travel, that the path electrons travel is a circuit, materials that carry electricity are conductors and that materials that do not carry electricity are insulators.</p>	<p>SI-M-A6: Comparing alternative explanations and predictions.            SI-M-A67: Communicating scientific procedures, information, and explanations.            SI-M-B2: Communicating that current scientific knowledge guides scientific investigation.            PS-M-B2: Recognizing different forces and describing their effects ( gravity, electrical, magnetic)            ELA-4-M2: giving and following directions/procedures.            ELA-4-M6: participating in a variety of roles in group discussions.            ELA-7-M2: problem solving by using reasoning skills, life experiences, accumulated knowledge, and relevant available information.            PS-M-C6: describing the types of energy that can be involved, converted, or released in electrical circuits.</p>
<p style="text-align: center;"><b>MAGNET MANIA</b></p> 	<p style="text-align: center;"><b>FEBRUARY –</b></p> <p>Students will be able to determine the north and south poles of magnets.</p>	<p>SI-M-A6: Comparing alternative explanations and predictions.            SI-M-A7: Communicating scientific procedures, information, &amp; explanation.            SI-M-A8: Utilizing safety procedures during scientific investigation.            PS-M-B2: Recognizing different forces and describing their effects (gravity, electrical, magnetic)            ELA-4-MS: Giving and following directions/procedures.            ELA-4-M6: Participating in a variety of roles in group discussions.            ELA-7-M2: Problem solving by using reasoning skills, life experiences, accumulated knowledge, and relevant available information.</p>

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<p style="text-align: center;"><b>EARTH WORKS</b></p> 	<p style="text-align: center;"><b>MARCH –</b></p> <p style="text-align: center;"><b>Students will identify the three main layers of the earth, describe the composition of the earth's crust and plate tectonics and identify</b></p>	<p><b>ESSA-E-A1:</b> Understanding that earth materials are rocks, minerals, and soils.</p> <p><b>ESS-M-A1:</b> Understanding that the Earth is layered by density with an inner and outer core, a mantle, and a thin outer crust.</p> <p><b>ESS-M-A2:</b> Understanding that the Earth's crust and solid upper mantle are dividing plates that move in response to convection currents.</p>
<p style="text-align: center;"><b>DEAD OR ALIVE</b></p> 	<p style="text-align: center;"><b>APRIL -</b></p> <p style="text-align: center;"><b>Students will identify abiotic and biotic components of an ecosystem and understand why it is important for us to care for and protect our ecosystems.</b></p>	<p><b>SI-M-A4:</b> Developing descriptions, explanations, and graphs using data.</p> <p><b>LS-E-A1:</b> Identifying the needs of plants and animals, based on age-appropriate recorded observations.</p> <p><b>LS-E-A2:</b> Distinguishing between living and nonliving things.</p> <p><b>LS-E-A3:</b> Locating and comparing major plant and animal structures and their functions.</p> <p><b>LS-M-A1:</b> Describing the observable components and functions of a cell, such as a cell membrane, nucleus, and movement of molecules into and out of cells.</p> <p><b>SE-E-A2:</b> Understanding the components of a food chain.</p> <p><b>SE-E-A5:</b> Understanding that most plant and animal species are threatened or endangered today due to habitat loss or change.</p> <p><b>SI-E-B6:</b> Reviewing and asking questions about the results of investigations.</p>