

Correlations Between

*Seeds of Science/Roots of Reading*

Integrated Science and Literacy Units

And

State of Nevada Science Education Standards

Nevada Science Standards – K-2 <sup>nd</sup> Grade	2 <sup>nd</sup> - 3 <sup>rd</sup> Grade				3 <sup>rd</sup> - 4 <sup>th</sup> Grade				4 <sup>th</sup> - 5 <sup>th</sup> Grade			
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<p><b>Scientific Inquiry (Nature of Science Unifying Concept A)</b>                      Scientific inquiry is the process by which humans systematically examine the natural world. Scientific inquiry is a human endeavor and involves observation, reasoning, insight, energy, skill, and creativity. Scientific inquiry is used to formulate and test explanations of nature through observation, experiments, and theoretical or mathematical models. Scientific explanations and evidence are constantly reviewed and examined by others. Questioning, response to criticism and open communication are integral to the process of science.</p>												
<p><b>N.2.A Students understand that science is an active process of systematically examining the natural world.</b></p>												
N.2.A.1-Students know how to make observations and give descriptions using words, numbers, and drawings.	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●				

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N.2.A.2-Students know tools can be used safely to gather data and extend the senses.	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●				
N.2.A.3-Students know observable patterns can be used to predict future events or sort items.	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●				

**Science, Technology, and Society (Nature of Science Unifying Concept B)**

Technology defines a society or era. It can shape the environment in which people live, and it has increasingly become a larger part of people’s lives. While many of technology’s effects on society are regarded as desirable, other effects are seen as less desirable. These concepts are shared across subject areas such as science, math, technology, social studies and language arts. The development and use of technology affects society and the environment in which we live, and, at the same time, society influences the development of

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technology and its impact on culture.													
<b>N.2.B Students understand that many people contribute to the field of science.</b>													
N.2.B.1-Students know science engages men and women of all ages and backgrounds.	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●					
N.2.B.2-Students know that, in science, it is helpful to work in a team and share findings with others.	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●					
<b>Atmospheric Processes and the Water Cycle (Earth and Space Science Unifying Concept A)</b> Earth systems have internal and external sources of energy, both of which create heat. Driven by sunlight and Earth's internal heat, a variety of cycles connect and continually circulate energy and material through the components of the earth systems.													
<b>E.2.A Students understand that changes in weather often involve water changing from one</b>													

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state to another.														
E.2.A.1-Students know the Sun is a source of heat and light.					●●●	●●●								
E.2.A.2- Students know water on Earth can be a liquid (rain) or a solid (snow and ice), and can go back and forth from one form to the other.		●				●●●								
E.2.A.3- Students know weather changes from day to day and seasonally.						●●●								
E.2.A.4- Students know weather can be described by measurable quantities such as temperature,						●●●								

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wind direction and speed, and precipitation.													
<p><b>Solar System and Universe (Earth and Space Science Unifying Concept B)</b>                      The universe is a dynamic system of matter and energy. The universe is extremely large and massive with its components separated by vast distances. Tools of technology will continue to aid in the investigation of the components, origins, processes and age of the universe. Earth is one part in our solar system, which is within the Milky Way galaxy. The Sun is the energy-producing star for our solar system. Most objects in our solar system are in predictable motion, resulting in phenomena such as day/night, year, phases of the moon, tides, and eclipses.</p>													
<p><b>E.2.B Students understand there are objects in the sky, which display patterns.</b></p>													
E.2.B.1- Students know objects in the sky display patterns in how they look, where they are													

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located, and how they move.													
E.2.B.2- Students know the Sun <b>rises</b> every day, and the Moon can <b>rise</b> during the day and/or the night.													
E.2.B.3- Students know the Sun and Moon appear to move across the sky.													
E.2.B.4- Students know the Moon appears to change shape over the course of a month.													
<p><b>Earth's Composition and Structure (Earth and Space Science Unifying Concept C)</b>                      Earth is composed of materials that move through the biogeochemical cycles. Earth's features are shaped by ongoing and dynamic processes. These processes can be</p>													

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constructive or destructive and occur over geologic time scales.													
E.2.C Students understand that Earth materials include rocks, soils, and water.													
E.2.C.1- Students know Earth is composed of different kinds of materials (e.g. rocks, soils, and water)	●●●	●●				●							
E.2.C.2- Students know rocks come in many sizes and shapes, with various textures and colors.		●●●											
E.2.C.3- Students know soils have different colors or textures depending on their composition.	●●●												
<b>Matter (Physical Science Unifying Concept A)</b>													
Matter has various states with unique properties that can be used as a basis for organization.													

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<p>The relationship between the properties of matter and its structure is an essential component of study in the physical sciences. The understanding of matter and its properties leads to practical applications, such as the capability to liberate elements from ore, create new drugs, manipulate the structure of genes and synthesize polymers.</p>													
<p><b>P.2.A. Students understand that matter has observable properties.</b></p>													
P.2.A.1- Students know matter can exist as solids and as liquids.			●●●			●●●							
P.2.A.2- Students know some properties of materials can be changed by heating, freezing, mixing, cutting, or bending.			●●			●●●							
P.2.A.3- Students know matter can be categorized by observable properties, such as	●●●	●●●	●●●	●●	●●								

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color, size, shape, and weight.													
P.2.A.4- Students know different objects are made of many different types of materials.	● ●	● ●	● ● ●	● ●	● ●								
<b>Forces and Motion (Physical Science Unifying Concept B)</b>													
The laws of motion are used to describe the effects of forces on the movement of objects.													
<b>P.2.B Students understand that position and motion of objects can be described.</b>													
P.2.B.1-Students know the position and motion of an object can be changed by pushing or pulling.				● ● ●									
P.2.B.2-Students know things move in many different ways and at different speeds (e.g., straight													

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line, zigzag, vibration, circular motion, fast/slow).												
P.2.B.3-Students know magnets can be used to make some things move without being touched.				●●●								
P.2.B.4-Students know things fall to the ground unless something holds them up.				●●●								
<p><b>Energy (Physical Science Unifying Concept C)</b>                      The total energy of the universe is constant. All events involve the transfer of energy in one form or another. In all energy transfers, the overall effect is that the energy is spread out uniformly.</p>												
<p><b>P.2.C Students know heat, light, and sound can be produced.</b></p>												

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P.2.C.1-Students know sound is produced by vibrating objects.													
P.2.C.2-Students know objects can be described as hot or cold relative to another object.					●●●								
<p><b>Heredity (Life Science Unifying Concept A)</b>                      Heredity is the genetic passing of a set of instructions from generation to generation. These instructions are encoded as DNA and may manifest themselves as characteristics. Some characteristics are inherited, and some result from interactions with the environment.</p>													
<p><b>L.2.A Students understand that offspring resemble their parents.</b></p>													
L.2.A.1-Students know animals and plants have offspring that are similar to their parents.							●●●						
L.2.A.2-Students know	●●	●●					●●						

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differences exist among individuals of the same kind of plant or animal.													
<p><b>Structure of Life (Life Science Unifying Concept B)</b>                      All living things are composed of cells. Cells range from very simple to very complex and have structures which perform functions for the organism. Cells and structures can be damaged or fail because of intrinsic failures or disease.</p>													
<p><b>L.2.B Students understand that living things have identifiable characteristics.</b></p>													
L.2.B.1-Students know humans and other animals use their senses to know their world.	●●	●●					●●						
<p><b>Organisms and Their Environment (Life Science Unifying Concept C)</b>                      A variety of ecosystems and communities exist on Earth. Ecosystems are dynamic interactions of organisms and their environment. Ecosystems have distinct characteristics</p>													

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and components that allow certain organisms to thrive. Change in one or more components can affect the entire ecosystem.												
L.2.C Students understand that living things live in different places.												
L.2.C.1-Students know plants and animals need certain resources for energy and growth.							●●●					
L.2.C.2-Students know a habitat includes food, water, shelter and space.	●●●	●●●										
L.2.C.3-Students know living things are found almost everywhere in the world.	●●	●●					●●					
<b>Diversity of Life (Life Science Unifying Concept D)</b> Evidence suggests that living things change over periods of time. These changes can be												

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<p>attributed to genetic and/or environmental influences. This process of change over time is called biological evolution. The diversity of life on Earth is classified using objective characteristics. Scientific classification uses a hierarchy of groups and subgroups based on similarities that reflect evolutionary relationships.</p>													
<p><b>L.2.D Students understand that there are many kinds of living things on Earth.</b></p>													
L.2.D.1-Students know plants and animals can be sorted by observable characteristics and behaviors.	●●●	●●					●●●						
L.2.D.2-Students know some plants and animals are extinct.							●●●						

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