

**CURRICULUM FRAMEWORK**

**CONTENT AREA: Science**

**GRADE LEVEL/COURSE: 5<sup>th</sup> Grade**

What is to be taught	TIME PERIOD 1	TIME PERIOD 2	TIME PERIOD 3	TIME PERIOD 4
<p><b>STANDARDS/BENCHMARKS</b>                      1. Enduring understandings                      Derived from standards/ expectations                      Answered through:                      2. Essential questions  <i>(What should students understand by the end of a unit(s) in this time period?)</i></p>	<p><b>Unit/Topic: Matter and Chemical Changes</b>  <b>Students will understand:</b>                      1. Elements and compounds can be combined to make new forms of matter through various processes                      2. These forms of matter can be described by certain properties                      3. These forms of matter can be used for specific purposes according to their properties  <b>Derived from:</b>  <b>Standards/Expectations:</b>                      Sc St 2 Energy and Matter                      2. understand that matter change in both physical and chemical ways                      2. understand that materials can exist in different forms (solid, liquid, gas) and can be changed from one to another by heating and cooling                      2.1 know that materials made by chemically combining two or more substances may have properties that differ from the original properties                      2.2 recognize that there are 92 known elements in nature many of which combine to form compounds                      1.1 Identify alternative explanations to natural phenomena and design procedures to test explanations                      1.14 use metric units in measuring, calculating and reporting results  <b>Answered through:</b>                      Essential Question(s):                      1. What do we mean by matter?                      How can matter be described</p>	<p><b>Unit/Topic: Human Body and Cells</b>  <b>Students will understand:</b>                      The human body is a group of systems working together for homeostasis  <b>Derived from:</b>  <b>Standards/Expectations:</b>                      Sc St 3 Life Science and Interactions                      3.2 recognize that the human body is organized into systems                      3.3 understand that the human body systems depend on each other (nervous, circulatory, digestive, respiratory)                      3.10 demonstrate an understanding that all living things are made up of one or more cells and that complex multi cellular living things have tissues, organs and organ systems  <b>Answered through:</b>                      Essential Question(s):                      1. How does structure determine function?  <b>Unit/Topic: Nutrition</b>  <b>Students will understand:</b>                      1. Healthy living requires an individual to act on available information and act on that information                      2. The USDA food pyramid presents relative, not absolute, guidelines for nutrition                      3. Dietary requirements differ for individuals depending on such variables as age, weight, activity level, and overall health  <b>Derived from:</b>  <b>Standards/Expectations:</b></p>	<p><b>Unit/Topic: Weather and Climate</b>  <b>Students will understand:</b>                      1. Weather patterns affect climate patterns and human activity over time                      2. Weather prediction depends on seeing patterns and understanding variables.  <b>Derived from:</b>  <b>Standards/Expectations:</b>                      Sc St 4 Earth Science                      4.8 Distinguish between weather and climate                      4.9 know that clouds have properties, locations, and movements that can be observed and described                      4.10 know that weather can be described in measurable quantities, temperature, wind direction and precipitation                      4.11 identify the water cycle (evaporation, condensation, transpiration)                      4.12 compare weather patterns in different locations in the US and discuss how these patterns influence plant growth and human activity in those states                      4.13 know that energy from the sun heats the earth unevenly causing air movements resulting in changing weather patterns                      4.14 use weather maps and forecasts to predict local weather and that prediction depends on many changing variables                      4.15 conduct investigations to determine the effect of temperature or wind on evaporation and condensation</p>	<p><b>Unit/Topic: Geology and Fossils</b>  <b>Students will understand:</b>                      1. Geology tells the story of our past and may predict our future                      2. Forces within Earth create resources  <b>Derived from:</b>  <b>Standards/Expectations:</b>                      St 4 Earth Science                      4.1 identify Earth's energy resources and characterize each as renewable or nonrenewable (petroleum, coal, natural gas, propane, uranium)                      4.5 compare and contrast the environment of Colorado today to that of long ago through fossil evidence                      4.6 compare the similarities and differences between fossils and living organisms                      4.7 classify rocks and minerals according to their physical characteristics  <b>Answered through:</b>                      Essential Question(s):                      1. How do we know the difference between a rock and a hard place?                      2. How has the Earth changed over time/ How do we know?                      3. What is our future?</p>

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	<p>by properties?                  2.Are properties similar for all matter?                  3.What causes new forms of matter? Are there any new forms of matter left to discover?                  4.How do we know?</p> <p><b>Unit/Topic: Simple Machines/Forces</b>  <i>Students will understand:</i>                  1. Forces are the application of energy                  2. Forces are constant whether motion is involved or not  <i>Derived from:</i>  <b>Standards/Expectations:</b>                  Sc 2 Matter and Energy                  2.8 Describe how forces work in simple machines                  2.5 Recognize the forces of gravity, magnetism, and electricity operate simple machines                  2.6 Recognize the forces necessary for an object to move or to be in equilibrium                  1.2 differentiate between an explanation and a description                  1.5differentiate between ideas based on scientific fact or understanding and those based on myths or misrepresented data                  1.9 demonstrate ability to identify and control variables  <i>Answered through:</i>                  Essential Question(s):                  1. How do we really know that forces are affecting every object?</p>	<p>Sc St 3 Life Sciences And Interaction                  3.7 describe the process of digestion in humans and how human body gets energy from food                  3.8 describe basic food requirements for humans and classify food into basic food groups</p> <p><b>Answered through:</b>                  Essential Question(s):                  1. Can a healthy diet for one person be unhealthy for another?                  2. Why is the US so unhealthy despite so much information?</p>	<p><b>Answered through:</b>                  Essential Question(s):                  1. How do weather patterns influence plant growth and human activities? How does this affect us?                  2. Has the climate really changed?                  3. Can we really predict the weather?</p>	
<p><b>CURRICULUM ALIGNMENT</b>                  1. Key knowledge and skills                  2. Materials</p>	<p><i>Learned Through:</i>  <b>Unit/Topic: Matter and Chemical Changes</b>                  Key Knowledge:                  1. chemical changes</p>	<p><i>Learned Through:</i>  <b>Unit/Topic: Human Body and Cells</b>                  Key Knowledge:                  1. cells</p>	<p><i>Learned Through:</i>  <b>Unit/Topic: Weather and Climate</b>                  Key Knowledge:                  1. cloud properties</p>	<p><i>Learned Through:</i>  <b>Unit/Topic: Geology and Fossils</b>                  Key Knowledge:                  1. erosion</p>

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	<p>2. physical changes 3. properties 4. 3 states of matter 5. periodic table of elements 6. atoms 7. molecules Key Skills: 1. measurement Materials <b>Unit/Topic: Simple Machines and Force</b> Key Knowledge: 1. force- push, pull. Motion 2. simple machines 3. friction 4. Newton’s Laws 5. Potential energy 6. Kinetic energy 7. Variables 8. Equilibrium 9. Gravity, magnetism, electricity Key Skills: Materials</p>	<p>2. tissues 3. organs 4. systems Key Skills: <b>Unit/Topic: Nutrition</b> Key Knowledge: .1. basic food groups and foods in each 3. protein 4. fat 5. carbohydrates 6. cholesterol 7. variables influencing nutritional needs 8. USDA food pyramid guidelines Key Skills: 1. read and interpret food labels for nutrition information 2. analyze diets Materials</p>	<p>2. front 3. pressure 4. wind 5. evaporation 6. condensation 7. water cycle 8. heat energy 9. light Key Skills: 1. using weather tools 2. measuring weather variables 3. reading weather charts 4. making predictions Materials</p>	<p>2. weathering 3. classification 4. rocks 5. minerals 6. properties Key Skills: 1. testing properties of rocks/minerals Materials</p>
<p><b>COMPETENCIES</b> (What lifelong competencies can be integrated to help develop these? Literacy (reading, writing frameworks should be supported)Problem solving, communication, technology</p>	<p>Literacy Skills/ Strategies:</p>	<p>Literacy Skills/ Strategies:</p>	<p>Literacy Skills/ Strategies:</p>	<p>Literacy Skills/ Strategies:</p>
<p><b>ASSESSMENT/EVIDENCE OF UNDERSTANDING</b> 1. Performance tasks (High IQ) 2. Quizzes, tests, prompts</p>	<p>Performance Task          Quizzes, tests, prompts</p>			

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