

# Grade 2 Science Proficiency Scale T1 Earth Science

	Novice “1”	Approaching “2”	Proficient “3”	Advanced “4”
<b>Communication</b>	Practices asking questions to help check for understanding and explaining thinking in relation to Earth science concepts.	Asks questions to check for understanding or explains thinking in relation to Earth science concepts.	Asks questions to check for understanding and explains thinking in relation to Earth science concepts.	Asks questions to check for understanding; clearly explains strategies, thinking and conclusions in relation to Earth science concepts.
<b>Critical Thinking</b>	Participates in whole group reading, discussions, and observations about water, wind, and Earth events such as erosion; <u>and</u> observes design models to prevent the impact of land and water on the land.	Gathers information about water, wind, and Earth events such as erosion; <u>and</u> participates in the creation of design models of land and water and observes the connections and patterns about solutions that are designed to impact wind or water changing the land.	Creates questions and gathers information about water, wind, and Earth events such as erosion; <u>and</u> designs models of land and water and observes and explains the connections and patterns about solutions that are designed to impact wind or water changing the land.	Creates questions and gathers information about solid and liquid water locations and Earth events such as erosion and weathering; <u>and uses EDP to redesign unique and creative</u> models of land and water and observes and explains the connections and patterns about solutions that are designed to impact wind or water changing the land, <b>and shows understanding of the impact of decisions about materials and process used to create the solution.</b>
<p><b>North Dakota Science Standards</b></p> <ul style="list-style-type: none"> <li>• <b>2-ESS1-1: Use information from several sources to provide evidence that Earth events can occur quickly or slowly.</b></li> <li>• <b>2-ESS2-1: Compare and contrast multiple solutions designed to slow or prevent wind or water from changing the shape of the land.</b></li> <li>• <b>2-ESS2-2: Develop a model to represent the shapes and kinds of land and bodies of water in an area.</b></li> <li>• <b>2-ESS2-3: Obtain information to identify where water is found on Earth and that it can be solid or liquid.</b></li> </ul> <p><b>Disciplinary Core Ideas:</b></p> <ul style="list-style-type: none"> <li>• <b>ESS1.C: The History of the Planet:</b> Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe.</li> <li>• <b>ESS2.A: Earth Materials and Systems:</b> Wind and water can change the shape of the land.</li> <li>• <b>ESS2.B: Plate Tectonics and Large-Scale System Interactions:</b> Maps show where things are located. One can map the shapes and kinds of land and water in any area.</li> <li>• <b>ESS2.C: The Roles of Water in Earth’s Surface Processes:</b> Water is found in the ocean, rivers, lakes, and ponds. Water exists as solid ice and in liquid form.</li> </ul> <p><b>Crosscutting Concepts: Patterns ~ Stability and Change ~ Structure and Function ~ Cause – Effect</b></p>				

## Grade 2 Science Proficiency Scale T2 Physical Science

	<b>Novice “1”</b>	<b>Approaching “2”</b>	<b>Proficient “3”</b>	<b>Advanced “4”</b>
<b>Communication</b>	Practices asking questions to help check for understanding.	Asks questions to check for understanding or explains thinking in relation to Physical science concepts.	Asks questions to check for understanding and explains thinking in relation to Physical science concepts.	Asks questions to check for understanding; clearly explains strategies, thinking and conclusions in relation to Physical science concepts.
<b>Critical Thinking</b>	Participates in whole group reading, discussions and observations about the observable properties of different materials; <u>and</u> participates in a demonstration about how small parts can be taken apart and reassembled to create something new.	Gathers information about the observable properties of different materials; <u>and</u> demonstrate how small parts can be taken apart and reassembled to create something new and observes the properties of materials and helps select the best type for a particular purpose.	Creates questions and gathers information about the observable properties of different materials, including changes that can be reversed and those that cannot; <u>and</u> understands and demonstrates how small parts can be taken apart and reassembled to create something new analyzing the properties of materials and determining the best type for a particular purpose citing evidence and reflecting upon the thinking process.	Creates questions and gathers information about the observable properties of different materials, including changes that can be reversed and those that cannot; <u>and</u> understands and uses EDP to demonstrate unique and creative ways that small parts can be taken apart and reassembled to create something new analyzing the properties of materials <u>and</u> determining the best type for a particular purpose citing evidence and reflects upon the thinking process.
<p><b>North Dakota Science Standards</b></p> <ul style="list-style-type: none"> <li>• <b>2-PS1-1: Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.</b></li> <li>• <b>2-PS1-2: Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.</b></li> <li>• <b>2-PS1-3: Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.</b></li> <li>• <b>2-PS1-4: Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.</b></li> </ul> <p><b>Disciplinary Core Ideas</b></p> <ul style="list-style-type: none"> <li>• <b>PS1.A: Structure and Properties of Matter:</b> Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties. Different properties are suited to different purposes. A great variety of objects can be built up from a small set of pieces.</li> <li>• <b>PS1.B: Chemical Reactions:</b> Heating or cooling a substance may cause change that can be observed. Sometimes these changes are reversible, and sometimes they are not.</li> </ul> <p><b>Crosscutting Concepts: Patterns ~ Cause and Effect ~ Energy and Matter</b></p>				

# Grade 2 Science Proficiency Scale T3 Life Science

	<b>Novice “1”</b>	<b>Approaching “2”</b>	<b>Proficient “3”</b>	<b>Advanced “4”</b>
<b>Communication</b>	Practices asking questions to help check for understanding.	Asks questions to check for understanding or explains thinking in relation to Life science concepts.	Asks questions to check for understanding and explains thinking in relation to Life science concepts.	Asks questions to check for understanding; clearly explains strategies, thinking and conclusions in relation to Life science concepts.
<b>Critical Thinking</b>	Participates in whole group reading, discussions, and observations about what plants need in order to grow (sunlight and water) and the diversity of plant and animal life in different habitats and the process of pollination; <u>and</u> observes the connections between parts of a system.	Gathers information about what plants need in order to grow (sunlight and water) and the diversity of plant and animal life in different habitats and the process of pollination; <u>and</u> shows the connections between parts of a system by participating in the designing of a model to mimic the function of pollination.	Creates questions and gathers information about what plants need in order to grow (sunlight and water) and the diversity of plant and animal life in different habitats and the process of pollination; <u>and</u> shows the connections between parts of a system by designing a model to mimic the function of pollination, and reflects upon the thinking process.	Creates questions and gathers information about what plants need in order to grow (sunlight and water) and the diversity of plant and animal life in different habitats and the process of pollination; <u>and</u> shows the connections between parts of a system by using EDP to redesign a unique and creative model to mimic the function of pollination, and reflect upon the thinking process .
<p><b>North Dakota Science Standards</b></p> <ul style="list-style-type: none"> <li>• <b>2-LS2-1: Plan an investigation to determine if plants need sunlight and water to grow.</b></li> <li>• <b>2-LS2-2: Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.</b></li> <li>• <b>2-LS4-1: Make observations of plants and animals to compare the diversity of life in different habitats.</b></li> </ul> <p><b>Disciplinary Core Ideas:</b></p> <ul style="list-style-type: none"> <li>• <b>LS2.A: Interdependent Relationships in Ecosystems:</b> Plants depend on water and light to grow. Plants depend on animals for pollination or to move their seeds around.</li> <li>• <b>LS4.D: Biodiversity and Humans:</b> There are many kinds of living things in any area, and they exist in different places on land and in water.</li> </ul> <p><b>Crosscutting Concepts: Cause and Effect ~ Structure and Function</b></p>				