

Louisiana Believes

Crosswalk for Louisiana Student Standards for Science and NGSS: 2nd grade

This document provides guidance to assist teachers, schools, and systems with determining alignment to [Louisiana Student Standards for Science](#) for resources designed for the Next Generation Science Standards. This guidance document is considered a “living” document, as we believe that teachers and other educators will find ways to improve the document as they use it. Please send feedback to STEM@la.gov so that we may use your input when updating this guide.

Published March 12, 2022



MATTER AND ITS INTERACTIONS		2-PS1-1
LSSS	NGSS	
Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.		
Clarification Statement		
Observations could include color texture, hardness, or flexibility. Patterns could include the similar properties that different materials share.		
Science and Engineering Practice:		Planning and carrying out
investigations		
Disciplinary Core Ideas:		Structure and Properties of Matter
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.		
Crosscutting Concepts:		Patterns
Patterns in the natural and human designed world can be observed, <u>used to describe phenomena, and used as evidence.</u>	Patterns in the natural and human designed world can be observed.	

*Underlined sections denote **additional information** in the Louisiana Student Standards for Science.

MATTER AND ITS INTERACTIONS		2-PS1-2
LSSS	NGSS	
Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.		
Clarification Statement		
Examples of properties could include, strength, flexibility, hardness, texture, or absorbency		
Science and Engineering Practice:		Analyzing and Interpreting Data
Disciplinary Core Ideas:		Structure and Properties of Matter
Different properties are suited to different purposes.		
Crosscutting Concepts:		Cause and Effect
Simple tests can be designed to gather evidence to support or refute student ideas about causes.		

MATTER AND ITS INTERACTIONS		2-PS1-3
LSSS	NGSS	
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.		
Clarification Statement		
Examples of pieces could include blocks, building bricks, or other assorted small objects. <u>Provide students with the same number of objects to create a different object.</u>	Examples of pieces could include blocks, building bricks, or other assorted small objects.	
Science and Engineering Practice: Solutions	Constructing Explanations and Designing	
Disciplinary Core Ideas:	Structure and Properties of Matter	
Different properties are suited to different purposes. A great variety of objects can be built up from a small set of pieces.		
Crosscutting Concepts:	Energy and Matter	
Objects may break into smaller pieces, be put together into larger pieces, or change shapes		

*Underlined sections denote **additional information** in the Louisiana Student Standards for Science.

MATTER AND ITS INTERACTIONS		2-PS1-4
LSSS	NGSS	
Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot		
Clarification Statement		
<u>Demonstrations</u> of reversible changes could include materials such as water, butter or crayons at different temperatures. <u>Demonstrations</u> of irreversible changes could include cooking an egg, freezing a plant leaf, or heating paper.	<u>Examples</u> of reversible changes could include materials such as water, butter or crayons at different temperatures. <u>Examples</u> of irreversible changes could include cooking an egg, freezing a plant leaf, or heating paper.	
Science and Engineering Practice:	Engaging in Argument from Evidence	
Disciplinary Core Ideas:	Chemical Reactions	
Heating or cooling a substance may cause changes that can be observed. Sometimes these changes are reversible, and sometimes they are not.		
Crosscutting Concepts:	Cause and Effect	
Events have causes that generate observable patterns.		

*Underlined sections denote **information** that does **not** appear in both sets of standards.

ECOSYSTEMS: INTERACTIONS, ENERGY, AND DYNAMICS		2-LS2-1
LSSS	NGSS	
Plan and conduct an investigation to determine if plants need sunlight and water to grow.		
Clarification Statement		
<u>Emphasis is on</u> testing one variable at a time <u>during investigations.</u>	<u>Assessment is limited to</u> testing one variable at a time.	
Science and Engineering Practice:	Planning and Carrying Out Investigations	
Disciplinary Core Ideas:	Interdependent Relationships in Ecosystems	
Plants depend on water and light to grow.		
Crosscutting Concepts:	Crosscutting Concepts	
Events have causes that generate observable patterns.		

*Underlined sections denote **information** that does **not** appear in both sets of standards.

ECOSYSTEMS: INTERACTIONS, ENERGY, AND DYNAMICS		2-LS2-2
LSSS	NGSS	
Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.		
Clarification Statement		
Students could use the model to describe: (1) How the structure of the model gives rise to its function. (2) Structure-function relationships in the natural world that allow some animals to disperse seeds or pollinate plants.		
Science and Engineering Practice:		Developing and Using Models
Disciplinary Core Ideas:		Interdependent Relationships in Ecosystems
Plants may depend on animals for pollination or to move their seeds around. (LE.LS2A.b)		
Developing Possible Solutions		
NONE PROVIDED IN LSSS	<u>Designs can be conveyed through sketches, drawings or physical models. These representations are useful in communicating ideas for a problem's solutions to other people.</u>	
Crosscutting Concepts:		Structure and Function
The shape and stability of structures of natural and designed objects are related to their functions.		

*Underlined sections denote **information** that does **not** appear in both sets of standards.

BIOLOGICAL EVOLUTION: UNITY AND DIVERSITY		2-LS4-1
LSSS	NGSS	
Make observations of plants and animals to compare the diversity of life in different habitats.		
Clarification Statement		
Emphasis is on the diversity of living things in each of a variety of different habitats. <u>Students could explore different habitats in the community (e.g., school, aquariums, and neighborhoods).</u>	Emphasis is on the diversity of living things in each of a variety of different habitats.	
Science and Engineering Practice:	Planning and Carrying Out Investigations	
Disciplinary Core Ideas:	Biodiversity and Humans	
There are many kinds of living things in any area, and they exist in different places on land, in water, and in air. (LE.LS4D.a)		
Crosscutting Concepts:	Patterns	
<u>Patterns in the natural and human designed world can be observed, used to describe phenomena, and used as evidence.</u>	NONE PROVIDED IN NGSS	

*Underlined sections denote **additional information** in the Louisiana Student Standards for Science.

EARTH'S PLACE IN THE UNIVERSE		2-ESS1-1
LSSS	NGSS	
Use information from several sources to provide evidence that Earth events can occur quickly or slowly.		
Clarification Statement		
Examples of events and timescales could include volcanic explosions and earthquakes, which happen quickly, and erosion of rocks, which occurs slowly.		
Science and Engineering Practice:		Constructing explanations and designing solutions
NONE PROVIDED IN LSSS	Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions. <u>Make observations from several sources to construct an evidence-based account for natural phenomena.</u>	
Science and Engineering Practice:		Obtaining, evaluating, and communicating information
<u>Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.</u> <u>Obtain information using various texts, text features (e.g., headings, tables of contents, glossaries, electronic menus, icons), and other media that will be useful in answering a scientific question and/or supporting a scientific claim.</u>		NONE PROVIDED IN NGSS
Disciplinary Core Ideas:		The History of Planet Earth
Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe. (LE.ESS1C.a)		
Disciplinary Core Ideas:		Defining and Delimiting Engineering Problems
<u>Asking questions, making observations, and gathering information are helpful in thinking about problems. (ETS.LE.1A.b)</u>		NONE PROVIDED IN NGSS
Crosscutting Concepts:		Stability and Change
Things may change slowly or rapidly		

*Underlined sections denote **information** that does **not** appear in both sets of standards.

EARTH'S SYSTEMS		2-ESS2-1
LSSS	NGSS	
Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.		
Clarification Statement		
Examples of solutions could include different designs of dikes and windbreaks to hold back wind and water, and different designs for using shrubs, grass, and trees to hold back the land		
Science and Engineering Practice: Solutions		Constructing Explanations and Designing
Disciplinary Core Ideas:		Earth Materials and Systems
Wind and water can change the shape of the land.		
Crosscutting Concepts:		Stability and Change
Things may change slowly or rapidly.		

EARTH'S SYSTEMS		2-ESS2-2
LSSS	NGSS	
Develop a model to represent the shapes and kinds of land and bodies of water in an area.		
Clarification Statement		
Models do not have to be to scale.	Models do not have to be to scale. <u>Does not include qualitative scaling in models.</u>	
Science and Engineering Practice:		Developing and Using Models
Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, storyboard) that represent concrete events or design solutions. <u>Develop and/or use a model to represent amounts, relationships, relative scales (bigger, smaller), and/or patterns in the natural and designed world(s).</u>	Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, storyboard) that represent concrete events or design solutions. Develop a model to represent patterns in the natural world.	
Disciplinary Core Ideas:		Plate Tectonics and Large-Scale System Interactions
Maps show where things are located. One can map the shapes and kinds of land and water in any area. (LE.ESS2B.a)		
Disciplinary Core Ideas:		Developing Possible Solutions
<u>Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for solutions to a problem.</u>	NONE PROVIDED IN NGSS	
Crosscutting Concepts:		Crosscutting Concepts
Patterns in the natural <u>and human designed</u> world can be observed, <u>used to describe phenomena and used as evidence.</u>	Patterns in the natural world can be observed.	

*Underlined sections denote **information** that does **not** appear in both sets of standards.

EARTH'S SYSTEMS		2-ESS2-3
LSSS	NGSS	
Obtain <u>and communicate</u> information to identify where water is found on Earth and that it can be solid or liquid.	Obtain information to identify where water is found on Earth and that it can be solid or liquid.	
Clarification Statement		
Students use reliable sources to identify the patterns of where water is found and its natural form (solid or liquid). Examples of how water can be found on Earth as water or ice could include a frozen pond, a liquid pond, a frozen lake, or a liquid lake.		
Science and Engineering Practice:	Obtaining, evaluating, and communicating information	
<p>Obtaining, evaluating, and communicating information: Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.</p> <p>Obtain information using various texts, text features (e.g., headings, tables of contents, glossaries, electronic menus, icons), and other media that will be useful in answering a scientific question <u>and/or supporting a scientific claim.</u></p>	<p>Obtaining, evaluating, and communicating information: Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.</p> <p>Obtain information using various texts, text features (e.g., headings, tables of contents, glossaries, electronic menus, icons), and other media that will be useful in answering a scientific question.</p>	
Disciplinary Core Ideas:	The Roles of Water in Earth's Surface Processes	
Water is found in the ocean, rivers, lakes and ponds. Water exists as solid ice and in liquid form.		
Crosscutting Concepts:	Patterns	
Patterns in the natural <u>and human designed</u> world can be observed, <u>used to describe phenomena, and used as evidence.</u>	Patterns in the natural world can be observed.	

*Underlined sections denote **information** that does **not** appear in both sets of standards.