



# Louisiana Believes

## Louisiana Guide to Implementing Amplify Science: Grade K-2

To assist teachers with the implementation of the Amplify Science curriculum for grades Kindergarten - 2, this document provides guidance regarding how Amplify Science modules correlate with the Louisiana Student Standards for Science (LSSS). The Amplify Science curriculum provides ample instructional guidance for teachers. This Louisiana Guide for Implementing Amplify Science goes a step further to point out places in which teachers may need to make strategic decisions considering their unique context.

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](mailto:STEM@la.gov) so that we may use your input when updating this guide.

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Kindergarten Standards by Module <sup>1</sup>

	Unit 1 Needs of plants and Animals	Unit 2 Pushes and Pulls	Unit 3 Sunlight and Weather
<b>Number of Lessons</b>	22 lessons	22 lessons	22 lessons
<b>Anchor Phenomenon Question</b>	How can kids in Mariposa Grove attract monarch caterpillars to their neighborhood?	How can we create a pinball machine for our class?	Why are the playgrounds at two schools different temperatures? Why does one playground flood?
<b>Books in the Unit</b>	<i>Science Walk</i> <i>A Plant in the Desert</i> <i>Above and Below</i> <i>Investigating Monarchs</i> <i>Handbook of Plants</i>	<i>Talking About Forces</i> <i>Building with Forces</i> <i>Room 4 Solves a Problem</i> <i>A Busy Day in Pushville</i> <i>Forces in Ball Games</i>	<i>What is the Weather Like Today?</i> <i>Getting Warm in the Sunlight</i> <i>Cool People in Hot Places</i> <i>Tornado! Predicting Severe Weather</i> <i>Handbook of Models</i>
<b>Standards</b>	K-LS1-1 K-ESS3-1 K-ESS3-3 K-ESS2-2	K-PS2-1 K-PS2-2	K-PS3-1 K-PS3-2 K-ESS2-1 K-ESS3-2

<sup>1</sup> Adapted from guidance developed by Amplify Science

**Kindergarten Investigative Phenomena by Unit<sup>1</sup>**

Units	Concept Focus Questions
Unit 1  Needs of plants and Animals	Chapter 1: Why are there no monarch caterpillars since the Field was made into the Garden? Chapter 2: Why did two milkweed seeds become plants, but the other did not? Chapter 3: Why do the milkweed plants that get water grow differently? Chapter 4: How can humans make sure that other living things will be able to live and grow?
Unit 2  Pushes and Pulls	Chapter 1: How do we make a pinball start to move? Chapter 2: How can we make a pinball move as far as we want? Chapter 3: How do we make a pinball move to a certain place? Chapter 4: How do we make a moving pinball change direction? Chapter 5: How can we make the pinball machine do all the things we want it to do? Chapter 6: Where are the forces around us?
Unit 3  Sunlight and Weather	Chapter 1: What is the weather like on the playgrounds? Chapter 2: Why do playgrounds get warm? Chapter 3: Why are the playgrounds warmer in the afternoon? Chapter 4: Why is Woodland Elementary School’s playground always warmer during recess? Chapter 5: Why does only Woodland Elementary School’s playground flood?

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Grade 1 Standards by Unit <sup>1</sup>

	<b>Unit 1</b> <b>Animal and Plant Defenses</b>	<b>Unit 2</b> <b>Light and Sound</b>	<b>Unit 3</b> <b>Spinning Earth</b>
<b>Number of Lessons</b>	22 lessons	22 lessons	22 lessons
<b>Anchor Phenomenon Question</b>	How can a sea turtle survive in the ocean after being released by an aquarium?	How can we use light and sound to design shadow scenery and sound effect for a puppet theater?	Why doesn't the sky always look the same?
<b>Books in the Unit</b>	<i>Tortoise Parts</i> <i>Whose Lunch Is This?</i> <i>Parents and Offspring</i> <i>Frog Models</i> <i>Spikes, Spines, and Shells: A Handbook of Defenses</i>	<i>Engineering with Light and Sound Can You See in the Dark?</i> <i>What Made This Shadow?</i> <i>Let's Test!</i> <i>What Vibrates?</i>	<i>After Sunset</i> <i>Nighttime Investigation</i> <i>What Spins?</i> <i>A Walk Through the Seasons</i> <i>Patterns of Earth and Space</i>
<b>Standards</b>	1-LS1-1 1-LS1-2 1-LS3-1	1-PS4-1 1-PS4-2 1-PS4-3 1-PS4-4	1-ESS1-1 1-ESS1-2 1-PS4-2

<sup>1</sup> Adapted from guidance developed by Amplify Science

Grade 1 Investigative Phenomena by Unit<sup>1</sup>

Unit	Investigative Phenomena Questions
Unit 1  Animal and Plant Defenses	Chapter 1: How does Spruce the Sea Turtle do what she needs to do to survive? Chapter 2: How can Spruce the Sea Turtle survive where there are sharks? Chapter 3: How can Spruce the Sea Turtle’s offspring survive where there are sharks? Chapter 4: How can aquarium scientists explain animal defenses to visitors?
Unit 2  Light and Sound	Chapter 1: How do we make brighter or darker areas on a surface? Chapter 2: How do we make a dark area in a bright puppet show scene? Chapter 3: How do we make bright, medium bright, and dark areas in a puppet show scene? Chapter 4: How do we design a sound source to go with a puppet show scene?
Unit 3  Spinning Earth	Chapter 1: Why did the sky look different to Sai than to his grandma? Chapter 2: Why was it daytime for Sai when it was nighttime for his grandma? Chapter 3: Why did daytime change to nighttime while Sai talked on the phone? Chapter 4: What will Sai see in the sky when he calls his grandma tomorrow? Chapter 5: Why was it nighttime for Sai when he called his grandma during winter?

<sup>1</sup>Adapted from guidance developed by Amplify Science

Grade 2 Standards by Unit <sup>1</sup>

	Unit 1 Plant and Animal Relationships	Unit 2 Properties of Materials	Unit 3 Changing Landforms
<b>Number of Lessons</b>	22 lessons	22 lessons	22 lessons
<b>Anchor Phenomenon Questions</b>	What is happening to the chalta trees in the Bengal Tiger Reserve?	How can we design a glue mixture that is better than what the school uses now?	Why is the edge of the ocean cliff closer to the flagpole than it used to be?
<b>Books in the Unit</b>	<i>My Nature Notebook</i> <i>A Plant Is a System</i> <i>Habitat Scientist</i> <i>Investigating Seeds</i>	<i>What If Rain Boots Were Made of Paper?</i> <i>Can You Change It Back?</i> <i>Jess Makes Hair Gel</i> <i>Jelly Bean Engineer</i> <i>The Handbook of Interesting Ingredients</i>	<i>Landform Postcards</i> <i>Gary's Sand Journal</i> <i>Making Models of Streams</i> <i>What's Stronger? How Water Causes Erosion</i> <i>Handbook of Land and Water</i>
<b>Standards</b>	2-LS2-1 2-LS2-2 2-LS4-1 2-ESS2-2	2-PS1-1 2-PS1-2 2-PS1-3 2-PS1-4	2-ESS1-1 2-ESS2-1 2-ESS2-2 2-ESS2-3

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Grade 2 Investigative Phenomena by Unit<sup>1</sup>

Unit	Investigative Phenomena Questions
Unit 1  Plant and Animal Relationships	Chapter 1: Why aren't new chalta trees growing in the Bengal Tiger Reserve? Chapter 2: Why aren't the chalta seeds getting the sunlight and water they need to grow? Chapter 3: Why aren't the chalta seeds getting to places where they can grow? Chapter 4: How are other seeds in the reserve able to get to places where they can grow?
Unit 2  Properties of Materials	Chapter 1: How can you make a sticky glue? Chapter 2: Can heating a substance (and returning it to its original temperature) make a better glue? Chapter 3: What ingredients can be used to make a glue that is sticky and strong? Chapter 4: What is the glue recipe that best meets our design goals?
Unit 3  Changing Landforms	Chapter 1: How did the edge of the cliff get to be so close to the flagpole? Chapter 2: How did the recreation center's cliff change? Chapter 3: How did the recreation center's cliff erode without the director noticing? Chapter 4: Could the recreation center's cliff erode quickly?

<sup>1</sup>Adapted from guidance developed by Amplify Science