



# Louisiana Believes

## Louisiana Guide to Implementing Amplify: Grade 4

To assist teachers with the implementation of the fourth grade Amplify curriculum, this document provides guidance regarding how Amplify units correlate with the [Louisiana Student Standards for Science](#) (LSSS). The Amplify curriculum provides ample instructional guidance for teachers. This Louisiana Guide for Implementing Amplify goes a step further to point out places in which teachers may need to make strategic decisions considering student needs.

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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## Table of Contents

<a href="#">Standards by Unit</a>	3
<a href="#">Investigative Phenomena by Unit</a>	4
<a href="#">LDOE Formative Assessment Resources</a>	5

Standards by Unit<sup>1</sup>

	Unit 1 Energy Conversions	Unit 2 Vision & Light	Unit 3 Earth's Features	Unit 4 Waves, Energy, & Information
<b>Number of Lessons</b>	22 lessons	22 lessons	22 lessons	22 lessons
<b>Anchor Phenomenon Question</b>	Why does Ergstown keep having blackouts?	Why is an increase in light affecting the health of Tokay geckos in a Philippine rain forest?	What was the environment of this place like in the past?	How can a mother dolphin and her calf communicate underwater when they cannot see each other? How can humans use patterns to communicate?
<b>Books in the Unit</b>	<i>Systems</i> <i>Energy Past and Present</i> <i>Sunlight and Showers</i> <i>Blackout!</i> <i>It's All Energy</i>	<i>Investigating Animal Senses</i> <i>I See What You Mean</i> <i>Crow Scientist</i> <i>Seeing Like a Shrimp and</i> <i>Smelling Like a Snake</i> <i>Handbook of Animal Eyes</i>	<i>Clues for the Past</i> <i>Through the Eyes of a Geologist</i> <i>Arguing to Solve a Mystery</i> <i>Rocky Wonders</i> <i>Fossil Hunter's Handbook</i>	<i>Warning: Tsunami!</i> <i>Sound of the Move</i> <i>Seeing Sound</i> <i>The Scientist Who Cracked the</i> <i>Dolphin Code</i> <i>Patterns in Communication</i>
<b>Standards</b>	4-PS3-1 4-PS3-2 4-PS3-3* 4-PS3-4 4-ESS3-1 4-ESS3-2*	4-LS1-1 4-LS1-2 4-PS4-2	4-ESS1-1 4-ESS2-1 4-ESS2-2 4-ESS3-2	4-PS3-2 4-PS3-3 4-PS4-1 4-ESS3-2 4-LS1-2*

\* The performance expectation is only partially addressed using the identified phenomenon. The performance expectation is addressed in other unit(s).  
Standard 4-ESS2-3 is partially addressed throughout the Grade 4 modules.

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

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

Units	Investigative Phenomena Questions
Unit 1 Energy Conversions	Chapter 1: What happened to the electrical system the night of the Ergstown blackout? Chapter 2: What makes the devices in Ergstown output energy or fail to output energy? Chapter 3: Where does the electrical energy for the devices in Ergstown come from? Chapter 4: How does energy get to the devices all over Ergstown?
Unit 2 Vision & Light	Chapter 1: How does a Tokay gecko get information about its environment? Chapter 2: How does light allow a Tokay gecko to see its prey? Chapter 3: How does a Tokay gecko know that it is looking at its prey? Chapter 4: How could more light at night make it hard for a Tokay gecko to see its prey? Chapter 5: How do our senses help us understand our environment?
Unit 3 Earth's Features	Chapter 1: How did the fossil get inside the rocky outcrop? Chapter 2: What was the environment of Desert Rocks National Park in the past? Chapter 3: What is the order of the past environments of Desert Rocks National Park? Chapter 4: Why did more rock layers get exposed in Desert Rocks Canyon than in Keller's Canyon?
Unit 4 Waves, Energy, & Information	Chapter 1: How does a mother dolphin communicate with her calf across a distance? Chapter 2: How does sound energy travel through the water from a mother dolphin to her calf? Chapter 3: How does a dolphin calf know which call is his mother's call? Chapter 4: How can humans use patterns to communicate?

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**LDOE Formative Assessment Resources**

Created by Louisiana educators to support formative assessment in the classroom, the Department has released a library of discrete items and item sets correlated to the Louisiana Student Standards for Science. These items, along with LEAP 2025 Practice Test Items, may be used in conjunction with guidance from high-quality curriculum as opportunities for students to demonstrate what they have learned. LDOE Formative Assessment Resources can be found on the [K-12 Science Planning](#) webpage.

Module	Discrete Items	Item Sets and Practice Test Items
Unit 1 Energy Conversions	Hockey Puck (4-PS3-1) Pool Temperature(4-PS3-2) Boat Design (4-PS3-4) Wind Power (4-ESS3-1)	Practice Item Set Heating with Solar Energy (4-PS3-4 and 4-ESS3-1) Practice Test Item Set Marble Experiment (4-PS3-1 and 4-PS3-3) Practice Test Item Striking Flint (4-PS3-3 and 4-PS3-2)
Unit 2 Vision & Light	Green Pitcher (4-LS1-1) Spiders (4-LS1-2) Cave (4-PS4-2)	Practice Test Item Set Predator and Prey (4-LS1-2 and 4-PS4-2) Practice Test Item Beavers (4-ESS2-3 and 4-LS1-1) Blackbirds (4-ESS2-3 and 4-LS1-1) Cuttlefish (4-LS1-1 and 4-LS1-2)
Unit 3 Earth’s Features	LA Coast (4-ESS2-1) Grand Canyon (4-ESS2-1) Dam (4-ESS2-1) Ashfall (4-ESS3-2)	Practice Test Item Set Hawaiian Volcanoes (4-ESS2-2 and 4-ESS3-2) Sierra Nevada (4-ESS1-1 and 4-ESS2-2)
Unit 4 Waves, Energy, & Information	Marbles (4-PS3-3) Puddles (4-PS4-1)	Hurricanes (4-ESS2-1 and 4-PS4-1)
Additional Standards	Termite (4-ESS2-3)	