

Louisiana Believes

Louisiana Guide to Implementing PhD Science: Grade 4

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

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 classroomsupporttoolbox@la.gov so that we may use your input when updating this guide.

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Standards by Module ¹

	Module 1 Earth Features	Module 2 Energy	Module 3 Sense and Response	Module 4 Light
Approximate Timeframe	27 days	26 days	31 days	27 days
Anchor Phenomenon	Formation of the Grand Canyon's features	Windmills at work	Elephants sensing distant rainstorms	Visibility and communication to Howland Island
Essential Question	How did the Grand Canyon's features form?	How do windmills change wind to light?	How do elephants sense rainstorms from more than 100 miles away?	Why didn't Amelia Earhart complete her journey?
Instructional Texts	<i>The Grand Canyon</i> <i>Who were the Wright Brothers</i>	<i>The Boy Who Harnessed the Wind</i>	<i>The Elephant Scientist</i>	<i>Amelia Lost: The Life and Disappearance of Amelia Earhart</i>
Standards	4-ESS1-1 4-ESS2-1 4-ESS2-2 4-ESS3-1 4-ESS3-2	4-PS3-1 4-PS3-2 4-PS3-3 4-PS3-4	4-LS1-1 4-LS1-2 4-PS4-1	4-PS4-2

Standard 4-ESS2-3 is partially addressed throughout the Grade 4 modules.

¹ Adapted from guidance developed by PhD Science

Alignment to EAGLE 2.0

The EAGLE 2.0 online tool supports formative assessment in the classroom and can be used in conjunction with PhD Science assessment guidance to enhance teaching and learning. [A Teacher’s Guide to LEAP 360](#) provides an overview of the online tool and information on how to access the science EAGLE assessment items. The assessment items below can be used immediately following a unit of study to help measure student progress.

Module	Eagle Discrete Items	EAGLE Item Sets and Practice Test Items
Module 1 Earth Features	998125 (4-ESS2-1) Ashfall (4-ESS3-2) Grand Canyon (4-ESS2-1) Dam (4-ESS2-1) Wind Power 136574 (4-ESS3-1)	Sierra Nevada (4-ESS1-1 and 4-ESS2-2)
Module 2 Energy	1025192 (4-PS3-1) 1025194 (4-PS3-2) 1025196 (4-PS3-4) 1025361 (4-PS3-3)	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) Striking Flint (4-PS3-3 and 4-PS3-2)
Module 3 Sense and Response	Green Pitcher 1025204 (4-LS1-1) Spiders 4 1025223 (4-LS1-2) Puddles 1025227 (4-PS4-1)	Hurricanes (4-ESS2-1 and 4-PS4-1) Practice Test Item Beavers (4-ESS2-3 and 4-LS1-1)
Module 4 Light	1025238 (4-PS4-2)	Predator and Prey (4-LS1-2 and 4-PS4-2)
Additional Standards	Termite (4-ESS2-3)	Blackbirds (4-ESS2-3 and 4-LS1-1*)

PhD Science Materials and Professional Development

Professional Development Services

PhD Science professional development sessions are designed for teachers, teacher leaders, instructional coaches, curriculum specialists, and administrators. For information about PhD Science professional development services, review the [PD Vendor Guide](#).

Purchasing Information

Great Minds offers PhD Science as a [Tier 1](#) science program for grades 3-5. Print materials and kits are available for purchase. The [Great Minds, PhD Science, Price List](#) provides an overview of the materials and kits available through the Department's [Instructional Materials Contract Pricing](#).