



Teaching and Learning

# Louisiana Guide to Implementing Great Minds PhD Science: Grade 3

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To assist teachers with the implementation of the PhD Science curriculum for grade 3, 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 Great Minds PhD Science 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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Standards by Module<sup>1</sup>

	Module 1	Module 2	Module 3	Module 4
	Weather and Climate	Survival	Traits	Forces and Motion
Approximate Time Frame	29 days	28 days	28 days	30 days
Anchor Phenomenon	1900 Galveston Hurricane	Butterfly Survival	Individual Variation in Humpback Whales	Motion in Outer Space
Essential Question	How can we prevent a storm from becoming a disaster?	How do butterflies survive over time in a changing environment?	What makes an individual humpback whale unique?	Why do objects appear to move differently in space than on Earth?
Instructional Texts	<i>Hurricanes!</i> <i>Tornadoes!</i> <i>Marvelous Mattie: How Margaret E. Knight Became an Inventor</i>	<i>A Butterfly is Patient</i> <i>Amos &amp; Boris</i>	<i>Here come the Humpbacks</i>	<i>Moon Shot</i>
Standards	3-ESS2-1 3-ESS2-2 3-ESS3-1	3-LS2-1 3-LS4-1 3-LS4-3 3-LS4-4	3-LS1-1 3-LS3-1 3-LS3-2 3-LS4-2	3-PS2-1 3-PS2-2 3-PS2-3 3-PS2-4

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

## Concept Focus by Module<sup>1</sup>

Module	Concept Focus Questions
Module 1 Weather and Climate	Concept 1: How do we describe weather? Concept 2: How do people know what weather to expect? Concept 3: How can we plan for severe weather? Application of Concept - Engineering Challenge: How can people design better solutions to reduce the impact of weather hazards?
Module 2 Survival	Concept 1: What do fossils reveal about the past? Concept 2: How do organisms get what they need to survive? Concept 3: What happens to organisms when the environment changes? Application of Concepts - Engineering Challenge: How can we help monarchs survive in a changing environment?
Module 3 Traits	Concept 1: How can we identify individuals? Concept 2: How do individuals change over time? Science Challenge: How does water in the plant's environment influence the plant's traits? Concept 3: How do individuals get their traits? Concept 4: How do individual's traits affect their lives? Application of Concepts
Module 4 Forces and Motion	Concept 1: How can we describe and predict an object's motion? Concept 2: What can cause the motion of an object to change? Concept 3: How can an object move without being touched? Application of Concepts - Engineering Challenge: How can we use magnets to design a solution to help astronauts in space?

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

## LDOE Formative Assessment Resources

LDOE formative assessment resources include a library of Louisiana educator-created discrete items and sets, LEAP Practice Test Items and LEAP Assessment Guide Items correlated to the Louisiana Student Standards for Science. These resources can be used alongside guidance from a high-quality curriculum to provide opportunities for students to showcase their learning.

Module	Discrete Items	Sets
<b>Module 1</b>  <b>Weather and Climate</b>	<p><b><u>LDOE Formative Assessment Items (PasswordEducate2020):</u></b></p> <ul style="list-style-type: none"> <li>LA_BOS (3-ESS2-1)</li> <li>Climates (3-ESS2-2)</li> <li>Gr3 Tornadoes, Levees (3-ESS3-1)</li> </ul> <p><b><u>LEAP Practice Test Standalone Items:</u></b></p> <ul style="list-style-type: none"> <li>16 (3-ESS2-2)</li> <li>9 (3-ESS3-1)</li> </ul> <p><b><u>LEAP Assessment Guide Items:</u></b></p> <ul style="list-style-type: none"> <li>Tornadoes (3-ESS3-1)</li> </ul>	<p><b><u>LDOE Formative Assessment Sets (PasswordEducate2020):</u></b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul> <p><b><u>LEAP Practice Test Items:</u></b></p> <ul style="list-style-type: none"> <li>Winter Storms (3-ESS2-1 and 3-ESS3-1)</li> </ul> <p><b><u>LEAP Assessment Guide Sets:</u></b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>
<b>Module 2</b>  <b>Survival</b>	<p><b><u>LDOE Formative Assessment Items (PasswordEducate2020):</u></b></p> <ul style="list-style-type: none"> <li>Penguins, Lions and Tigers (3-LS2-1)</li> <li>Fossils, Ashfall Fossil bed, Shark Tooth (3-LS4-1)</li> <li>Gulf Birds, Snails (3-LS4-3)</li> <li>Red Snapper, Tortoises (3-LS4-4)</li> </ul> <p><b><u>LEAP Practice Test Standalone Items:</u></b></p> <ul style="list-style-type: none"> <li>38 (3-LS2-1)</li> <li>12 &amp; 33 (3-LS4-1)</li> <li>13 &amp; 17 (3-LS4-3)</li> <li>14 (3-LS4-4)</li> </ul> <p><b><u>LEAP Assessment Guide Items:</u></b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p><b><u>LDOE Formative Assessment Sets (PasswordEducate2020):</u></b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul> <p><b><u>LEAP Practice Test Items:</u></b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul> <p><b><u>LEAP Assessment Guide Sets:</u></b></p> <ul style="list-style-type: none"> <li>Task Set: Tundra Animals: Meet the Caribou and the Musk Ox (3-LS2-1, 3-LS4-3)</li> </ul>

Module	Discrete Items	Sets
<p><b>Module 3</b></p> <p><b>Traits</b></p>	<p><b><u>LDOE Formative Assessment Items (PasswordEducate2020):</u></b></p> <ul style="list-style-type: none"> <li>Black Bears, Butterfly Cycle (3-LS1-1)</li> <li>Moth, Bowerbirds, Cat’s Claw (3-LS4-2)</li> </ul> <p><b><u>LEAP Practice Test Standalone Items:</u></b></p> <ul style="list-style-type: none"> <li>10 (3-LS3-1)</li> <li>11 (3-LS3-2)</li> <li>34 (3-LS4-2)</li> </ul> <p><b><u>LEAP Assessment Guide Items:</u></b></p> <ul style="list-style-type: none"> <li>Spoonbills (3-LS3-2)</li> <li>Pollinators (3-LS4-2)</li> </ul>	<p><b><u>LDOE Formative Assessment Sets (PasswordEducate2020):</u></b></p> <ul style="list-style-type: none"> <li>Task Set: Pythons (3-LS3-1 and 3-LS3-2)</li> </ul> <p><b><u>LEAP Practice Test Items:</u></b></p> <ul style="list-style-type: none"> <li>Amazon River Dolphins (3-LS2-1 and 3-LS1-1)**</li> <li>Rattlesnake (3-LS3-1 and 3-LS4-2)</li> <li>Plants and Heat (3-LS3-2 and 3-ESS2-1)**</li> </ul> <p><b><u>LEAP Assessment Guide Sets:</u></b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>
<p><b>Module 4</b></p> <p><b>Forces and Motion</b></p>	<p><b><u>LDOE Formative Assessment Items (PasswordEducate2020):</u></b></p> <ul style="list-style-type: none"> <li>Cradle, Volleyball, Skateboard (3-PS2-1)</li> <li>Ball Type (3-PS2-2)</li> </ul> <p><b><u>LEAP Practice Test Standalone Items:</u></b></p> <ul style="list-style-type: none"> <li>35 (3-PS2-1)</li> <li>36 (3-PS2-2)</li> <li>31 &amp; 32 (3-PS2-3)</li> <li>15 &amp; 39 (3-PS2-4)</li> </ul> <p><b><u>LEAP Assessment Guide Items:</u></b></p> <ul style="list-style-type: none"> <li>Toy Truck Investigation (3-PS2-1)</li> </ul>	<p><b><u>LDOE Formative Assessment Sets (PasswordEducate2020):</u></b></p> <ul style="list-style-type: none"> <li>Item Set: Oil Spill (3-PS2-2 and 3-PS2-3)</li> <li>Item Set: Bowling (3-PS2-1 and 3-PS2-2)</li> </ul> <p><b><u>LEAP Practice Test Items:</u></b></p> <ul style="list-style-type: none"> <li>Seesaws (3-PS2-1 and 3-PS2-2)</li> </ul> <p><b><u>LEAP Assessment Guide Sets:</u></b></p> <ul style="list-style-type: none"> <li>Item Set: Lightning and Static Electricity (3-PS2-3, 3-ESS2-1)**</li> </ul>

\*\*Contains performance expectation(s) from a previous unit.