Louisiana Guide to Implementing Activate Learning OpenSciEd: Grade 7

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Updated June 2, 2026

Purpose

To assist teachers with the implementation of the Activate Learning OpenSciEd curriculum for grade 7, this document provides guidance regarding how Activate Learning OpenSciEd units correlate with the Louisiana Student Standards for Science (LSSS). The Activate Learning OpenSciEd curriculum provides ample instructional guidance for teachers. This Louisiana Guide for Implementing Activate Learning OpenSciEd takes it a step further by highlighting areas where teachers may need to make strategic decisions that consider student needs.

Activate Learning OpenSciEd Grade 7 may include performance expectations featured in other grade levels. These units are intentionally designed to provide students with the opportunity to incrementally make sense of phenomena, building understanding and abilities over time through a coherent storyline. Modifications to the sequence or content of lessons within these units could undermine the design and should therefore be approached with caution and careful consideration.

This guidance document is considered a 'living' document, reflecting the expectation that teachers and other educators will continue to identify opportunities for improvement as it is applied in practice. Please send feedback to STEM@la.gov so that the LDOE may incorporate your suggestions when updating this guide.

2026-2027 Transitional Guidance

To assist schools and systems in implementing OpenSciEd for Grades 6-8, the LDOE has designed transitional guidance for the 2026-2027 school year. This rolling guidance aims to address ongoing challenges while maintaining curriculum coherence and alignment with the Louisiana Student Standards for Science (LSSS).

The long-term goals of this guidance are:

- Suggestions for addressing the unique language of the LSSS;
- Coherence across Louisiana customizations; and
- Explicit pacing recommendations.

To prevent gaps in learning as guidance evolves, for the **2026-2027 school year only**:

- Ecosystem Dynamics will appear on both the Grade 6 and Grade 7 scope and sequences.
- Genetics will appear on both the Grade 7 and Grade 8 scope and sequences.

This guidance is intended for **one year only** and will be updated for the 2027-2028 school year.

What is new this year for Grade 7:

- Integrated Thermal Energy and Weather, Climate, & Water Cycling Units
- Genetics Unit added as Unit 6 on the Scope and Sequence

Transition Year 2026-2027 Standards by Unit

	Units 1 & 2 Integrated Thermal Energy and Weather, Climate, & Water Cycling OpenSciEd Units 6.2 and 6.3	**Unit 3** Chemical Reactions & Matter Transformations OpenSciEd Unit 7.1	**Unit 4** Metabolic Reactions OpenSciEd Unit 7.3	**Unit 5** Matter Cycling & Photosynthesis OpenSciEd Unit 7.4	**Unit 6** Genetics OpenSciEd Unit 8.5	**Unit 7** Ecosystem Dynamics OpenSciEd Unit 7.5
Unit Question	Why does a lot of rain, hail, or snowfall at some times and not others?	How can we make something new that was not there before?	How do things inside our bodies work together to make us feel the way we do?	Where does food come from and where does it go next?	Why are living things different from one another?	How does changing an ecosystem affect what lives there?
Standards	7-MS-ESS2-4 7-MS-ESS2-5 7-MS-ESS2-6 7-MS-PS1-4 7-MS-PS3-4	7-MS-PS1-2 7-MS-PS1-5 6-MS-PS1-1	7-MS-LS1-3* 7-MS-LS1-7 8-MS-LS1-5*	7-MS-LS1-6 6-MS-LS2-3 8-MS-PS1-3	7-MS-LS3-2 7-MS-LS4-5 8-MS-LS1-5* 8-MS-LS3-1	7-MS-LS2-4 7-MS-LS2-5 6-MS-LS2-1 6-MS-LS2-2
Timing	August - October	October-November	December-January	January - March	March-April	April-May

7-LS4-4 and 7-ESS3-5 *are not addressed by the Grade 7 OpenSciEd units. The performance expectations can be addressed by incorporating the Grade 7 Louisiana Sample Scope and Sequence units as needed.*

Transitional Year 2026-2027 Pacing and Unit Order Guidance

**Modification of the lessons, even in the ways suggested here, should be approached with careful consideration. Additional attention should be given to navigation in lessons where adjustments are made to maintain coherence from the student's perspective.*

Unit	Louisiana-Specific Guidance: Pacing and Implications for Unit Order†

Units 1 & 2
 	
Integrated Thermal Energy
 	
and
 	
Weather, Climate, and Water Cycling
 	
OpenSciEd Units 6.2 and 6.3
	*See the **customized storyline** for coherence flow, navigation suggestions, and student and teacher-facing resources.*
	• ***LA suggestion* - Between Lessons 2 & 3:** Integrate basic thermometer practice right before starting Lesson 3, because this lesson assumes students already know how to read and interpret temperature data.
	• ***LA suggestion* - Lesson 3 *(these appear in lesson 3a in the customized storyline):*** Before having students draw their consensus models, pause the 6.3 storyline. Spend a few days on the following activities from 6.2:
	  ○ Lesson 6 modeling activities
	  ○ Lessons 10 & 11 food coloring and computer simulations
	  ○ Lessons 12 & 13 simulations
	• ***LA suggestion* - Lesson 4 *(these appear in lesson 4a in the customized storyline)*:** Students collaboratively plan an investigation to test the temperatures of different ground surfaces and the air above them. As they plan this investigation, weave in the experimental design discussions from 6.2 Lessons 3 & 4. Use this moment to formally introduce independent, dependent, and control variables, helping students understand why controlling variables (like sun exposure or wind) is necessary for a fair test. This will add an additional day to this lesson. After collecting their data, students realize the ground warms the air. Before they finalize their consensus models for this energy transfer, bring in the marble manipulatives and simulations from 6.2 Lessons 12 & 13. This allows them to discover the mechanism of conduction — that kinetic energy is transferred from faster-moving ground particles to slower-moving air particles through physical collisions.
	• ***LA suggestion* - Lesson 5:** Reduce by doing teacher demonstrations of the soap bubble experiment so both demos are done on the same day.
	• ***LA suggestion* - Lesson 7:** Reduce by discussing the bottle setups, but not actually building them. Students can analyze predetermined data and use hygrometers to compare room air and outside air humidity.
	• ***LA suggestion* - Lesson 15:** Reduce by having a premade set of charts colored by the teacher and only allowing students to practice on one map.

Unit	Louisiana-Specific Guidance: Pacing and Implications for Unit Order†
Unit 3 **Chemical Reactions & Matter Transformations** **OpenSciEd Unit 7.1**	Pre-teaching the idea that atoms exist and that they make up molecules is counterproductive to the trajectory of this unit. Students may have heard of the words "atoms" and "molecules" in other contexts and should be encouraged to try to apply any ideas about the particulate nature of matter they may bring to the table in the first part of the unit. • ***LA suggestion*** **- Lesson 1:** Since students have already been exposed to classroom norms and the typical progression of anchoring phenomena routine, time can be reduced for these. • ***LA suggestion*** **- Lesson 9:** Do the boiling water demonstration as written to capture the gas and test its flammability (which proves it puts out a flame). However, skip the small-group mass/volume data collection for the three liquids. Instead, simply provide students with the known densities of water (1.0 g/mL), rubbing alcohol (0.78 g/mL), and glycerin (1.26 g/mL). Measure the mass and volume of the captured liquid together as a class, calculate its density, and immediately compare it to the provided list to conclude the condensed gas is just water. • **Lesson 13:** If short of time, this lesson could be skipped. Usually there will be a category of questions around odors or smells of the bath bombs and why there are different odors, so this lesson helps to fully close out the DQB. In addition, this DCI LS1.D is spread across multiple units in OpenSciEd.
Guidance for Units 4-7 in development!	

† Adapted from the OpenSciEd TeacherBackground Knowledge for "How will I need to modify the unit if taught out of sequence?" and "How do I shorten or condense the unit if needed? How can I extend the unit if needed?" for each unit.

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.

Unit	Discrete Items	Item Sets and Practice Test Items
Thermal Energy	***LDOE Formative Assessment Items (Password-Educate2020):*** • Brass Experiment, Jeff's Models (7-MS-PS1-4) • Temperature Increase (7-MS-PS3-4) ***LEAP Practice Test Standalone Items:*** • 22 (7-MS-PS1-4) • 40 (7-MS-PS3-4) ***LEAP Assessment Guide Items:*** • N/A ***LEAP Science Released Items:*** • Heat Transfer (7-MS-PS3-4)	***LDOE Formative Assessment Sets (Password-Educate2020):*** • Item Set: Spider Plants (7-MS-PS1-4 and 7-MS-PS3-4) ***LEAP Practice Test Sets:*** • Item Set: Melting Icebergs (7-MS-PS1-4 and 7-MS-PS3-4) ***LEAP Assessment Guide Sets:*** • Task Set: Properties of water (7-MS-PS1-4 and 7-MS-PS3-4) ***LEAP Science Released Items:*** • N/A
Water Cycling & Weather	***LDOE Formative Assessment Items (Password-Educate2020):*** • Water Cycle (7-MS-ESS2-4) • Washington Rainfall (7-MS-ESS2-5) ***LEAP Practice Test Standalone Items:*** • 21 (7-MS-ESS2-4) • 23 (7-MS-ESS2-6) ***LEAP Assessment Guide Items:*** • Weather fronts (7-MS-ESS2-5)	***LDOE Formative Assessment Sets (Password-Educate2020):*** • N/A ***LEAP Practice Test Sets:*** • Item Set: Arizona Monsoon (7-MS-ESS2-5 and 7-MS-ESS2-6) ***LEAP Assessment Guide Sets:*** • N/A

Unit	Discrete Items	Item Sets and Practice Test Items
	LEAP Science Released Items: • N/A	***LEAP Science Released Items:*** • Item Set: El Niño (7-MS-ESS2-6 and 7-MS-ESS3-5)+
Chemical Reactions & Matter Transformations	***LDOE Formative Assessment Items (Password-Educate2020):*** • Two Solids, Hydrogen Iodide (7-MS-PS1-2) • Pesticides (7-MS-PS1-5) ***LEAP Practice Test Standalone Items:*** • 14, 34, 37 (7-MS-PS1-2) ***LEAP Assessment Guide Items:*** • Properties of substances (7-MS-PS1-2) ***LEAP Science Released Items:*** • N/A	***LDOE Formative Assessment Sets (Password-Educate2020):*** • N/A ***LEAP Practice Test Sets:*** • Item Set: Volcanic Carbon (7-MS-PS1-5, 7-MS-ESS3-5)+ ***LEAP Assessment Guide Sets:*** • N/A ***LEAP Science Released Items:*** • N/A
Metabolic Reactions	***LDOE Formative Assessment Items (Password-Educate2020):*** • Artificial Windpipe (7-MS-LS1-3) ***LEAP Practice Test Standalone Items:*** • 15, 41 (7-MS-LS1-3) • 33 (7-MS-LS1-7) ***LEAP Assessment Guide Items:*** • N/A ***LEAP Science Released Items:*** • Neurons (7-MS-LS1-3)	***LDOE Formative Assessment Sets (Password-Educate2020):*** • N/A ***LEAP Practice Test Sets:*** • N/A ***LEAP Assessment Guide Sets:*** • N/A ***LEAP Science Released Items:*** • N/A

Unit	Discrete Items	Item Sets and Practice Test Items
Matter Cycling & Photosynthesis *continued*	***LDOE Formative Assessment Items (Password-Educate2020):*** • Dandelions (7-MS-LS1-6) ***LEAP Practice Test Standalone Items:*** • 32 (7-MS-LS1-6) ***LEAP Assessment Guide Items:*** • N/A ***LEAP Science Released Items:*** • N/A	***LDOE Formative Assessment Sets (Password-Educate2020):*** • N/A ***LEAP Practice Test Sets:*** • Item Set: Louisiana Swamplands (7-MS-LS1-7 and 7-MS-LS1-6)* ***LEAP Assessment Guide Sets:*** • N/A ***LEAP Science Released Items:*** • Task Set: Marathon Runner (7-MS-LS1-7 and 7-MS-LS1-6)*
Ecosystem Dynamics	***LDOE Formative Assessment Items (Password-Educate2020):*** • N/A ***LEAP Practice Test Standalone Items:*** • 38 (7-MS-LS2-4) • 13 (7-MS-LS2-5) ***LEAP Assessment Guide Items:*** • Kudzu (7-MS-LS2-4) • Desertification (7-MS-LS2-5) ***LEAP Science Released Items:*** • N/A	***LDOE Formative Assessment Sets (Password-Educate2020):*** • Coral (7-MS-LS2-4, 7-MS-LS4-4) • Dead Zone (7-MS-LS1-7, 7-MS-LS2-5) ***LEAP Practice Test Sets:*** • Task Set: Zebra Mussels (7-LS2-4, 7-LS2-5) ***LEAP Assessment Guide Sets:*** • N/A ***LEAP Science Released Items:*** • N/A

Unit	Discrete Items	Item Sets and Practice Test Items
Genetics and Inheritance of Traits (Louisiana Scope and Sequence Unit)	***LDOE Formative Assessment Items (Password-Educate2020):*** • Whiptails, Siblings, Cystic Fibrosis, Amoebas (7-MS-LS3-2) • Anoles, Feral Chickens (7-MS-LS4-4) • Arctic Apples, Shar Pei (7-MS-LS4-5) ***LEAP Practice Test Standalone Items:*** • 35 (7-MS-LS4-4) • 39 (7-MS-LS4-5) ***LEAP Assessment Guide Items:*** • N/A ***LEAP Science Released Items:*** • N/A	***LDOE Formative Assessment Sets (Password-Educate2020):*** • Coral (7-MS-LS2-4, 7-MS-LS4-4) ***LEAP Practice Test Sets:*** • Item Set: Spider Plants (7-MS-LS3-2, 7-MS-LS4-4) ***LEAP Assessment Guide Sets:*** • Item Set: Reintroduction of the Takhi (7-MS-LS4-4, 7-MS-LS4-5) ***LEAP Science Released Items:*** • N/A
Additional Standards	***LDOE Formative Assessment Items (Password-Educate2020):*** • White Chuck Glacier (7-MS-ESS3-5) ***LEAP Practice Test Standalone Items:*** • 36 (7-MS-ESS3-5) ***LEAP Assessment Guide Items:*** • N/A ***LEAP Science Released Items:*** • N/A	***LDOE Formative Assessment Sets (Password-Educate2020):*** • N/A ***LEAP Practice Test Sets:*** • N/A ***LEAP Assessment Guide Sets:*** • N/A ***LEAP Science Released Items:*** • N/A

**set includes a performance expectation from a previous unit*
+set includes a performance expectation not fully covered in this scope and sequence