Louisiana Believes

Louisiana Guide to Piloting OpenSciEd: Grade 7

This document provides guidance to assist seventh-grade teachers with the piloting of OpenSciEd units. 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 so that we may use your input when updating this guide.

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DEPARTMENT of EDUCATION
Louisiana Believes

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Overview of OpenSciEd

OpenSciEd is an effort among science educators, curriculum developers, teachers and philanthropic foundations to improve the supply of and demand for high-quality K-12 science instructional materials by producing open-sourced, freely available instructional materials designed for college and career-ready science standards. OpenSciEd works with classroom educators, experienced science curriculum developers, individual school districts, education non-profits, and the science education community to create and pilot robust, research-based, open-source science instructional materials.

Field Testing and Release of Units

Ten partner states volunteered to join this effort including: California, Iowa, Louisiana, Massachusetts, Michigan, New Mexico, New Jersey, Oklahoma, Rhode Island and Washington. After the initial development of the OpenSciEd units, the unit prototypes or **field test units** underwent rigorous external review and robust field-testing in participating classrooms across partner states including seven Louisiana systems The field test units were then revised based on the feedback and data collected and submitted to NextGenScience Peer Review Panel before being made freely and openly available to the public upon earning a quality rating. The entire middle school program (18 units total) is now available to download for free online.

Unit Design & Sample Scope and Sequence

The units in the OpenSciEd Sample Scope and Sequence include bundles of performance expectations that are built around an anchor phenomenon. The OpenSciEd units may include performance expectations from previous or future grade levels. These units are intentionally designed to provide students the opportunity to incrementally make sense of phenomena to build understanding and abilities over time through a coherent storyline. Modification to the sequence or content of lessons within these units could undermine the design, and therefore is not recommended and should be approached with caution and careful consideration.

Contact

For questions or requests for additional information on the OpenSciEd initiative and/or materials, contact info@openscied.org.

Sample Scope and Sequence

	Unit 1 Thermal Energy OpenSciEd Unit 6.2	Unit 2 Weather, Climate, and Water Cycling OpenSciEd Unit 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 Ecosystem Dynamics OpenSciEd Unit 7.5
Anchor Phenomenon	How can containers keep stuff from warming up or cooling down?	Why does a lot of rain, hail, or snow fall 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?	How does changing a ecosystem affect what lives there?
Standards	7-PS1-4* 7-PS3-4 8-PS3-3 8-PS3-5 6-PS4-2*	7-ESS2-4 7-ESS2-5 7-ESS2-6 7-PS1-4*	7-PS1-2 7-PS1-5 6-PS1-1	7-LS1-3* 7-LS1-7 8-LS1-5*	7-LS1-6 6-LS2-3 8-PS1-3	7-LS2-4 7-LS2-5 6-LS2-1 6-LS2-2
Resource	*Complete Unit*	*Complete Unit*	*Complete Unit*	*Complete Unit*	*Complete Unit*	Complete *Unit*
Additional Resources	*Distance Learning* *Optional Pacing*	*Distance Learning* *Optional Pacing*	*Distance Learning* *Optional Pacing*	*Distance Learning* *Optional Pacing*	*Distance Learning* *Optional Pacing* *(coming soon)*	*Distance Learning* *(field test version)*

† 7-LS3-2, 7-LS4-4, 7-LS4-5, & 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.

**The performance expectation is partially addressed using the identified phenomenon and is addressed in multiple units.*

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.

Unit	Discrete Items	Item Sets and Practice Test Items
Thermal Energy	Brass Experiment (7-PS1-4) Jeff's Models (7-PS1-4) Temperature Increase (7-PS3-4)	Melting Icebergs (7-PS1-4, 7-PS3-4) Spider Plants (7-PS1-4, 7-PS3-4)
Water Cycling and Weather	Water Cycle (7-MS-ESS2-4) Washington Rainfall (7-MS-ESS2-5)	Arizona Monsoon (7-ESS2-5, 7-ESS2-6)
Chemical Reactions & Matter Transformations	Two Solids (7-MS-PS1-2) Hydrogen Iodide (7-MS-PS1-2) Pesticides (7-MS-PS1-5)	
Metabolic Reactions	Artificial Windpipe (7-MS-LS1-3) Dandelions (7-MS-LS1-7)	
Matter Cycling & Photosynthesis	Dandelions (7-LS1-6)	Louisiana Swamplands (7-LS1-7, 7-LS1-6)

Unit	Discrete Items	Item Sets and Practice Test Items
Ecosystem Dynamics		Zebra Mussels (7-LS2-4, 7-LS2-5) Volcanic Carbon (7-ESS3-5, 7-PS1-5) Coral (7-LS2-4, 7-LS4-4) Dead Zone (7-LS1-7, 7-LS2-5)
Genetics and Inheritance of Traits (Louisiana Scope and Sequence Unit)	Whiptails (7-MS-LS3-2) Siblings (7-MS-LS3-2) Cystic Fibrosis (7-MS-LS3-2) Amoebas (7-MS-LS3-2) Anoles (7-MS-LS4-4) Feral Chickens (7-MS-LS4-4) Arctic Apples (7-MS-LS4-5) Shar Pei (7-MS-LS4-5)	Coral (7-MS-LS2-4, 7-MS-LS4-4) Spider Plants (7-MS-LS3-2, 7-MS-LS4-4)
Additional Standards	White Chuck Glacier (7-MS-ESS3-5)	