

Louisiana Believes

2019-2020 Louisiana Guide to Piloting OpenSciEd: Grade 8

This document provides guidance to assist eighth grade teachers with the field-testing 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 classroomsupporttoolbox@la.gov so that we may use your input when updating this guide.

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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-profit Achieve, 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** undergo rigorous external review and robust field-testing in participating classrooms across partner states. Seven Louisiana districts are involved in field-testing the units. The field test units are revised based on the feedback and data collected. The revised or **complete** units are submitted to Achieve’s EQiP Peer Review Panel and made freely and openly available to the public upon earning a quality rating. The OpenSciEd release schedule provides for **complete units** to release three at a time beginning August 2019 with the entire middle school program (18 units total) fully completed and released in early 2022.

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 scope and sequence integrates the OpenSciEd curriculum and the [Grade 6 Louisiana Sample Scope and Sequence](#). The scope and sequence does not illustrate the only appropriate sequence to teach the units. The units can be organized into different learning sequences, and the performance expectations can be bundled around different phenomena.

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@openscienced.org.

Sample Scope and Sequence

	Unit 1 Biological Evolution	Unit 2 Embryological Similarities	Unit 3 Energy and Matter	Unit 4 Photosynthesis and Matter Cycling OpenSciEd Unit 7.4 (Optional)	Unit 5 Genetics and Traits	Unit 6 Physical Geology OpenSciEd Unit 6.4	Unit 7 Natural Hazards
Anchor Phenomenon	Archosaurs, sauropods and tyrannosaurs were anatomically different from organisms of today.	Chickens and cows have embryological similarities; yet, they are two different organisms.	In 2011, the Great East Japan Earthquake caused catastrophic damage. People in one small area continued to receive power.	Humans get food from eating, but plants get food from somewhere, too.	Charles Darwin's Finches on Galapagos Island were identical to mainland finches but had different beaks.	TBD	Lava from the Kawah Ijen volcano appears blue at times.
Standards	8-ESS1-4 8-LS4-1 8-LS4-2*	8-LS4-2* 8-LS4-3	8-PS1-3 8-PS1-6 8-PS3-3 8-PS3-5	8-PS1-3 7-LS1-6 6-LS2-3	8-LS1-4 8-LS1-5 8-LS3-1 8-LS4-6 8-ESS3-3	8-ESS2-1 8-ESS2-2 8-ESS2-3 8-ESS1-4	8-ESS3-1 8-ESS3-2 8-PS1-1
Resource	Louisiana Sample Scope and Sequence	Louisiana Sample Scope and Sequence	Louisiana Sample Scope and Sequence	Complete Unit available December 2019	Louisiana Sample Scope and Sequence	Field Test Unit Available March 2020	Louisiana Sample Scope and Sequence

OpenSciEd Units (Orange); Louisiana Sample Scope and Sequence Units (Green)

Alignment to EAGLE 2.0

The EAGLE 2.0 online tool supports formative assessment in the classroom and can be used in conjunction with OpenSciEd’s 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 in this guidance can be used immediately following a unit of study to help measure student progress.

Grade 8	EAGLE Discrete Items	EAGLE and Practice Test Item Sets
Biological Evolution	Items Coming Soon	Items Coming Soon
Embryological Similarities	Embryo Development (8-LS4-2)	
Energy and Matter	1014720 (8-PS1-3) Sailboat (8-PS3-5)	Solar Cooker (8-PS3-3, 8-PS3-5)
Photosynthesis and Matter Cycling OpenSciEd 7.4 (Optional)	1014720 (8-PS1-3)	
Genetics and Traits	Daisies (8-LS1-5) Hummingbird (8-LS4-6) Pollutants (8-ESS3-3) Miles Davis (8-LS3-1)	Potato Experiment (8-PS3-3) Surviving in Desert Landscapes (8-LS1-5, 8-LS1-4) Glowing Jellyfish (8-LS3-1, 8-LS4-6)
Physical Geology OpenSciEd Unit 6.4	SARocks (8-ESS2-1) Mushroom Rock (8-ESS2-2)	Planet_Earth (8-ESS2-3)
Natural Hazards	Marbles (8-PS1-1) NCslides (8-ESS3-2, 8-ESS2-2) Opal (8-ESS3-1, 8-ESS3-3) Tornado_8 (8-ESS3-2)	NCslides (8-ESS3-2, 8-ESS2-2) Tsunamis and the Louisiana Coast (8-ESS3-2, 8-ESS2-1) Nitinol (8-PS1-3, 8-PS1-1)

OpenSciEd Materials: Access and Purchasing Information

Educators piloting OpenSciEd may choose to download the open source [digital files](#) and/or [assemble their own kits](#). Print materials and kits are also available for purchase from participating vendors as described below.

Print Materials: Teacher and Student Edition Printed Booklets

Digital files (e.g. printed copies of Teacher Edition and Student Edition booklets) are available for purchase from Kendall Hunt.

Kits: Laboratory Equipment and Other Scientific Supplies

Kendall Hunt offers kits for *field test versions* of units. AquaPhoenix offers kits for *Complete Units* as they are released. The chart below provides an overview of the kits offered by vendor for 2019-2020.

2019-2020 OpenSciEd Sample Scope and Sequence Unit		Kendall Hunt	AquaPhoenix
Grade 6	Light and Matter: One Way Mirror 6.1 (Field Test Version)	√	
	Sound Waves 8.2 (Complete Unit)		√
	Contact Forces: Broken Things 8.1 (Field Test Version)	√	
	Forces at a Distance 8.3 (Complete Unit)		√
Grade 7	Thermal Energy 6.2 (Complete Unit)		√
	Water Cycling and Weather 6.3 (Field Test Version)	√	
	Chemical Reactions: Bath Bomb 7.1 (Field Test Version)	√	
	Metabolic Reactions 7.3 (Complete Unit)		√
Grade 8	Photosynthesis and Matter Cycling 7.4 (Complete Unit)		√

Ordering Information

- To purchase [Kendall Hunt](#) materials download the order form [here](#) and email it to orders@kendallhunt.com or fax it to 1-800-772-9165.
- To purchase AquaPhoenix materials click [here](#).

Professional Development Vendors

Teachers are better positioned to support students’ meaningful growth when they have access to initial and on-going professional development that helps them utilize quality curriculum effectively. OpenSciEd materials are freely accessible online. However, we highly recommend that all teachers participating in the pilot undergo at minimum, an **Initial OpenSciEd Training**, which is designed to build teachers’ familiarity with the structure, approach, and key components of the curriculum. The following professional development providers are staffed with qualified facilitators who have received official training from OpenSciEd.

OpenSciEd PD Provider	Contact	Initial Trainings	Follow-up Trainings	District Specific Trainings	Open Enrollment Events
LSU Gordon A. Cain Center	Brenda Nixon bnixon@lsu.edu 225-205-2680	✓	✓		✓
Louisiana Tech SciTech	Diane Madden dmadden@latech.edu 318-257-2866	✓	✓		✓
University of Texas at Austin Charles A. Dana Center	Sara Spiegel saraspiegel@austin.utexas.edu 512-522-5860	✓	✓	✓	✓

The Department will communicate OpenSciEd open enrollment events through [Teacher Leader Newsletters](#) and [School System Planning Calls](#).