



Teaching and Learning

# Louisiana Guide to Piloting OpenSciEd: Chemistry

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This document provides guidance to assist Chemistry teachers with the piloting of OpenSciEd Chemistry 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](mailto:STEM@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-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 undergo rigorous external review and robust field-testing in participating classrooms across partner states. The field test units are 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. All revised units are available for Biology. Chemistry and Physics revised units will be released on a [rolling basis](#) until the entire [three-course sequence](#) is published by Fall of 2024.

### Unit Design and 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. 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

Systems interested in piloting should reach out to [STEM@la.gov](mailto:STEM@la.gov) for direct support. For questions or requests for additional information on the OpenSciEd initiative and/or materials, contact [info@openscienced.org](mailto:info@openscienced.org).

## 2024-2025 Sample Scope and Sequence

	C.1 Thermodynamics in Earth's Systems	C.2 Structure and Properties of Matter	C.3 Molecular Processes in Earth's Systems	C.4 Chemical Reactions in Our World	C.5 Energy from Chemical & Nuclear Reactions
<b>Number of Lessons</b> <i>*lessons vary in length from 1-5 class periods</i>	13 lessons	14 lessons	15 lessons	15 lessons	15 lessons
<b>Anchor Phenomenon Question</b>	How can we slow the flow of energy on Earth to protect vulnerable coastal communities?	What causes lightning and why are some places safer than others when it strikes	How could we find and use the resources we need to live beyond Earth?	Why are oysters dying, and how can we use chemistry to protect them?	Which fuels should we design our next generation vehicles to use?
<b>Louisiana Students Standards for Science<sup>2</sup></b>	<b>HS-PS3-1+</b> <b>HS-PS3-4</b> HS-ESS2-2 HS-ESS2-4 HS-ESS2-7 HS-ESS3-1 HS-ESS3-5 HS-ESS3-6	<b>HS-PS1-1*</b> <b>HS-PS1-2*</b> <b>HS-PS1-3*</b> <b>HS-PS2-4+</b> <b>HS-PS2-6*</b> <b>HS-PS3-2+</b> <b>HS-PS3-5+</b>	<b>HS-PS1-1*</b> <b>HS-PS1-2*</b> <b>HS-PS1-3*</b> <b>HS-PS2-6*</b> HS-ESS1-2+ HS-ESS2-1+ HS-ESS1-5	<b>HS-PS1-5</b> <b>HS-PS1-6</b> <b>HS-PS1-7</b> HS-ESS2-6+ HS-ESS3-4*	<b>HS-PS1-4</b> <b>HS-PS1-8+</b> <b>HS-PS3-1+</b> <b>HS-PS3-2+</b> HS-ESS3-2+ HS-ESS3-4*
<b>Unit Resources</b>	<a href="#">Unit Materials</a>	<a href="#">Unit Materials</a>	<a href="#">Unit Materials</a>	<a href="#">Unit Materials</a>	<a href="#">Unit Materials</a>

HS-PS3-6 is a Louisiana-specific standard and not addressed; HS-PS3-3 is addressed in the Physics course

\*The performance expectation is addressed across multiple units. +The performance expectation is addressed across the three-course sequence (Biology, chemistry, Physics).

<sup>2</sup>Performance expectations which are unique to the Next Generation Science Standards for Life Science have not been included in this table.