

Louisiana Believes

Louisiana Guide to Piloting OpenSciEd: Grade 6

This document provides guidance to assist sixth-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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Table of Contents

| | |
|---|---|
| Overview of OpenSciEd | 3 |
| Sample Scope and Sequence | 4 |
| Alignment with EAGLE 2.0 | 5 |
| Distance Learning Support | 6 |

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 EQuIP 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 Light and Matter OpenSciEd 6.1 | Unit 2 Contact Forces OpenSciEd 8.1 | Unit 3 Sound Waves OpenSciEd 8.2 | Unit 4 Forces at a Distance OpenSciEd 8.3 | Unit 5 Earth in Space OpenSciEd 8.4 | Unit 6 Cells and Systems OpenSciEd 6.6 | Unit 7 Disruptions in Ecosystems |
|-------------------------------|---|---|--|---|--|---|---|
| Anchor Phenomenon | Sometimes materials can be reflective and see-through at the same time. | The glass screen of a cell phone is a pretty fragile thing. | Windows of a building can be seen visibly shaking while a truck across the parking lot plays loud music. | A membrane of a speaker vibrates. Inside of a speaker is a magnet and a coil of wire. | Many patterns can be observed in the sky, but there are other things out there that are more difficult to observe. | TBD | Disruptions in ecosystems can drastically impact the way they function. |
| Standards | 6-PS4-2* | 6-PS2-1 6-PS2-2 6-PS3-1 | 6-PS4-1 6-PS4-2* | 6-PS2-3 6-PS2-5 6-PS3-2 | 6-ESS1-1 6-ESS1-2 6-ESS1-3 6-PS2-4 6-PS4-2* 8-LS4-3 | 6-LS1-1 6-LS1-2 7-LS1-3* | 6-LS2-1 6-LS2-2 6-LS2-3 6-ESS3-4 7-PS1-5* 7-ESS2-4* 8-ESS2-1* |
| Resource | Field Test Unit available now | Complete Unit | Complete Unit | Complete Unit | Field Test Unit available now | Field Test Unit available now | Complete Unit |
| Additional Information | Complete Unit Available Winter 2020 | Complete Unit Available Now | Complete Unit Available Now | Complete Unit Available Now | Complete Unit Available Summer 2021 | Complete Unit Available Winter 2022 | Chapters 1-4 only |

*6-PS1-1 is not addressed by the Grade 6 OpenSciEd units. The performance expectation 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.

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

Alignment to EAGLE 2.0

The [EAGLE 2.0 formative assessment items](#) 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.

| Unit | EAGLE Discrete Items | EAGLE Item Sets and Practice Test Items |
|------------------------------------|---|--|
| Light and Matter OpenSciEd 6.1 | Spectral Signature (6-MS-PS4-2) Telescopes (6-MS-PS4-2) | Items Coming Soon |
| Contact Forces OpenSciEd 8.1 | Satellite (6-MS-PS2-1) Shin Guard Design (6-MS-PS2-1) Soccer Ball (6-MS-PS2-2) Juan’s Skateboard (6-MS-PS2-2) Sports Balls (6-MS-PS3-1) | Bowling (6-MS-PS3-1, 6-MS-PS2-2) |
| Sound Waves OpenSciEd 8.2 | Trials (6-MS-PS4-1) Reverberation (6-MS-PS4-1) | Ocean Waves (6-MS-PS4-1) |
| Forces at a Distance OpenSciEd 8.3 | Electric Motor (6-MS-PS2-3) Gr6 Moons (6-MS-PS2-4) Popcorn (6-MS-PS2-5) | Marbles (6-MS-PS3-1, 6-MS-PS3-2) Changes in the Earth's Magnetic Field (6-MS-PS2-3, 6-MS-PS2-5) |
| Earth in Space OpenSciEd 8.4 | Moons (6-MS-ESS1-1) Midnight_Sun (6-MS-ESS1-1) Spitzer (6-MS-ESS1-2) | Dwarf Planets (6-MS-ESS1-3) Asteroids in the Solar System (6-MS-ESS1-2, 6-MS-ESS1-3) |

| Unit | EAGLE Discrete Items | EAGLE Item Sets and Practice Test Items |
|---------------------------------|--|---|
| Cells and Systems OpenSciEd 6.6 | Gr6 Minerals (6-MS-LS1-1) Models (6-MS-PS1-1) Slugs and Chloroplast (6-MS-LS1-2) Plant Cells (6-MS-LS1-2) | Organelles (6-MS-LS1-1, 6-MS-LS1-2) |
| Disruptions in Ecosystems | Gr6 Red Snapper (6-MS-ESS3-4) Cherry Tree (6-MS-LS2-2) Wolves and Moose (6-MS-LS2-2) Microplastics (6-MS-LS2-2) | Deer (6-MS-LS2-1) Anasazi and the Great Drought (6-MS-LS2-1, 6-MS-LS2-2) |

Distance Learning Support

To support school systems, schools, and teachers in ensuring continuous learning in science, the Department will release guidance for implementing OpenSciEd in a hybrid or distance learning setting for every available OpenSciEd Unit.

Distance learning plans for each unit will contain the following:

- Links to OpenSciEd remote learning resources
- Unit guidance
- Detailed lesson-by-lesson guidance, including activities and slides for virtual classes
- Printable lesson documents to send home with students

The resources available now are linked below:

- [OpenSciEd Distance Learning](#) – This document contains links to distance learning support for each unit
- OpenSciEd Distance Learning Support Webinar [Slide Deck](#) and [Video](#)
- [Release Schedule for Science Distance Learning](#)