| Board Office Use: Legislative File Info. | |
|---|---|
| File ID Number | 18-0276 |
| Introduction Date | 5/9/18 |
| Enactment Number | 18-0826 |
| Enactment Date | 5/9/18 er |

OAKLAND UNIFIED SCHOOL DISTRICT

Community Schools, Thriving Students

DATE: May 9, 2018

TO: Board of Education

FROM: Kyla Johnson-Trammell, Superintendent

SUBJECT: Approval of FOSS Next Generation Science Instructional Materials Adoption – Elementary and Agreement with Delta Education

**Action Requested**

Adoption by the Board of Education of Resolution No. 1718-0160 - Lawrence Hall of Science's *Full Options Science System (FOSS) Next Generation* science program for grades TK-5 and Agreement with Delta Education for the period of May 9, 2018 through June 30, 2020, in an amount not to exceed a total of $1,793,050.15 for the purchase of instructional materials related thereto.

**Background / Discussion**

The current *FOSS (Full Options Science System)* curriculum (textbooks and kits) in classrooms are based on the 1998 CA Science Standards and are outdated. California adopted the Next Generation Science Standards (NGSS) in 2013 and finalized the California Framework for the NGSS in 2016. Students will be tested on the NGSS in the 2018-2019 school year with the new California Science Test (CAST).

While the OUSD Science Department has been preparing for the full implementation of NGSS curriculum since 2012, training Science Teacher Leaders and principals in the *Next Generation* Science Standards and providing all teachers with supplemental instructional tools to support the transition to NGSS while using the old edition of FOSS, it's important that all OUSD classrooms have standards-aligned materials for science in advance of the new statewide science test.

**Selection Process**

District science leaders in the department of Teaching & Learning have concluded a 10-month process of instructional materials review with extensive participation from OUSD teachers and principals, as well as members of the community, pursuant to the requirements set forth in the California Department of Education's Implementation of Instructional Materials Not Adopted by California.

In 2016-2017, the OUSD Science Department invited three top NGSS curriculum providers to present materials at four teacher and community engagement events in four different Oakland neighborhoods. At these sessions, educators and community members from 39 of our 54 elementary schools submitted feedback on the three programs.

The data from all four curriculum review sessions show that there is overwhelming consensus and support for OUSD to adopt the new NGSS edition of the familiar and trusted FOSS curriculum. At the review sessions, both new teachers and the most experienced teachers--the Lead Science Teachers (who ultimately will be responsible for supporting new science curriculum at the site level) ranked *FOSS Next Generation* as their first choice. Of the teachers who submitted feedback, 97% ranked FOSS above the other curriculum options overall, and 100% of respondents ranked as high or higher than the other programs in every single category.

**Resulting Agreement**

The Agreement resulting from the District's adoption of the curriculum would begin May 9, 2018, in order to immediately place the required order(s) for materials to ensure availability to students prior to the beginning of the 2018/2019 school year. In addition, considering the current and anticipated budgetary situation, Delta Education has agreed that the District may pay two installment payments for all of the materials ordered as follows: $1 Million in 2018/2019 and the whatever remains of the balance of the total contract not to exceed amount of $1,793.050.15 is (*i.e.,* no more than $793,050.15) in 2019/2020.

**Recommendation**
Approve (a) adoption of the *Full Options Science System (FOSS) Next Generation* science program (published by Delta Education) for grades TK-5 and (b) Agreement with Delta Education for the period May 9, 2018 - June 30, 2020 in an amount not to exceed a total of $1,793.050.15 for the purchase of instructional materials related thereto.

**Fiscal Impact**
The complete purchase of *FOSS Next Generation* instructional materials for elementary will not exceed a total of $1,793.050.15, with Delta Education agreeing that the District may make two installment payments for all of the materials initially ordered as follows: $1 Million in 2018/2019 and the remaining balance of $1,793.050.15 (*i.e.,* no more than $793,050.15) in 2019/2020. Expected annual costs to refurbish FOSS kits of consumable materials and purchase live organisms will not exceed $60,000 each of the two school years (for a total of $120,000), which estimated expenses are included in the not to exceed amount. This purchase assumes continued District investment in labor required to maintain, refurbish, and rotate the FOSS kits for the length of the adoption, currently approximately $100,000 annually.

**Funding Source**
Lottery Funds or Base General Purpose Funds, depending on 2018-19 and 2019-20 budgets.

**Attachment**
OUSD Science K_5 NGSS Curriculum Proposal (full report)
Exhibit A - Curriculum Proposal
Exhibit B - Delta Education Price Quotes and Price Lists
Exhibit C - OUSD-Delta Education Agreement

OAKLAND UNIFIED SCHOOL DISTRICT
Community Schools, Thriving Students

# CONTRACT JUSTIFICATION FORM
# This Form Shall Be Submitted to the Board Office With *Every* Consent Agenda Contract.

**Legislative File ID No.** 18-0276

**Department:** Teaching & Learning

**Vendor Name:** Delta Education

**Contract Term:** Start Date: May 9, 2018 End Date: June 30, 2020

**Annual Cost:** $ 1,793,050.15

**Approved by:** Sondra Aguilera, Senior Deputy Chief and David Chambliss, Deputy Chief

**Is Vendor a local Oakland business?** Yes ☐ No ☑

**Why was this Vendor selected?**

District science leaders in the department of Teaching & Learning have concluded a 10-month process of instructional materials review with extensive participation from OUSD teachers and principals, as well as members of the community, pursuant to the requirements set forth in the California Department of Education's Implementation of Instructional Materials Not Adopted by California. In 2016-2017, the OUSD Science Department invited three top NGSS curriculum providers to present materials at four teacher and community engagement events in four different Oakland neighborhoods. At these sessions, educators and community members from 39 of our 54 elementary schools submitted feedback on the three programs. The data from all four curriculum review sessions show that there is overwhelming consensus and support for OUSD to adopt the new NGSS edition of the familiar and trusted FOSS curriculum. 97% ranked FOSS above the other curriculum options overall, and 100% of respondents ranked as high or higher than the other programs in every single category.

**Summarize the services this Vendor will be providing.**

NGSS FOSS curriculum (including kits of hands-on materials), teacher materials, and student texts for grades K-5

**Was this contract competitively bid?** Yes ☐ No ☑

If No, answer the following:

1) How did you determine the price is competitive?

A price quote from Delta Education was compared with public price quotes from their national catalog.

2) Please check the competitive bid exception relied upon:

- [x] **Educational Materials**
- [ ] **Special Services** contracts for financial, economic, accounting, legal or administrative services
- [ ] **CUPCCAA exception** (Uniform Public Construction Cost Accounting Act)
- [ ] **Professional Service Agreements** of less than $86,000 (increases a small amount on January 1 of each year)
- [ ] **Construction related Professional Services** such as Architects, DSA Inspectors, Environmental Consultants and Construction Managers (require a "fair, competitive selection process)
- [ ] **Energy** conservation and alternative energy supply (e.g., solar, energy conservation, co-generation and alternate energy supply sources)
- [ ] **Emergency** contracts
- [ ] **Technology** contracts
  - [ ] electronic data-processing systems, supporting software and/or services (including copiers/printers) over the $86,000 bid limit, must be competitively advertised, but any one of the three lowest responsible bidders may be selected
  - [ ] contracts for computers, software, telecommunications equipment, microwave equipment, and other related electronic equipment and apparatus, including E-Rate solicitations, may be procured through an RFP process instead of a competitive, lowest price bid process
  - [ ] Western States Contracting Alliance Contracts (WSCA)
  - [ ] California Multiple Award Schedule Contracts (CMAS) [contracts are often used for the purchase of information technology and software]
- [ ] **Piggyback" Contracts** with other governmental entities
- [ ] **Perishable Food**
- [ ] **Sole Source**
- [ ] **Change Order for Material and Supplies** if the cost agreed upon in writing does not exceed ten percent of the original contract price
- [ ] **Other, please provide specific exception**

| Board Office Use: Legislative File Info. | |
|---|---|
| File ID Number | 18-0276 |
| Introduction Date | May 9, 2018 |
| Enactment Number | 18-0826 |
| Enactment Date | May 9, 2018 er |

**RESOLUTION OF THE BOARD OF EDUCATION**
**OF THE OAKLAND UNIFIED SCHOOL DISTRICT**
**RESOLUTION NO. 1718-0160**

**SELECTION AND PURCHASE OF INSTRUCTIONAL CURRICULUM MATERIALS (FOSS NEXT GENERATION ELEMENTARY SCIENCE)**

**WHEREAS**, pursuant to Board Policy 6161.1, the Governing Board is responsible for selecting textbooks and other instructional materials for use in District schools;

**WHEREAS**, the State Board of Education has adopted the Next Generation Science Standards, has finalized the California Framework for the Next Generation Standards, and will be assessing students on the Next Generation Science Standards beginning in 2018-19;

**WHEREAS**, the Governing Board shall select instructional materials for use in grades Kindergarten through 5th grade or shall have otherwise determined which instructional materials align with the state academic content standards;

**WHEREAS**, the Governing Board shall select instructional materials for grades K-5 upon determining that the materials are:

- Aligned to applicable academic content standards;
- Are provided by publishers that comply with legal requirements;
- Do not reflect adversely upon persons because of their race or ethnicity, gender, religion, disability, nationality, sexual orientation, occupation, or other characteristic listed in Education Code 220, nor contain any sectarian or denominational doctrine or propaganda contrary to law;
- Reflective of California's multicultural society, avoid stereotyping, and contribute to a positive learning environment;
- Are accurate, objective, current , and suited to the needs and comprehension of district students at their respective grade levels;
- With the exception of literature and trade books, use proper grammar and spelling;
- Do not expose students to a commercial brand name, product, or corporate or company logo unless the Board makes a specific finding that the use is appropriate;
- Support the district's adopted courses of study and curricular goals
- Contribute to a comprehensive, balanced curriculum
- Demonstrate reliable quality of scholarship as evidenced by:
- Provide for a wide range of materials at all levels of difficulty, with appeal to students of varied interests, abilities and developmental levels
- Include materials that stimulate discussion of contemporary issues and improve students' thinking and decision-making skills

- Contribute to the proper articulation of instruction through grade levels
- Have corresponding versions available in languages other than English as appropriate
- Include high-quality teacher's guides
- Meet high publishing standards in terms of the quality, durability and appearance of paper, binding, text and graphics
- Upon adoption of standards by the SBE, not exceed maximum textbook weight standards
- Meet the standards for social content that portray in a realistic manner democratic values, cultural pluralism, and the diversity of the state's population, and emphasize people in varied, positive, and contributing roles;

**WHEREAS**, as summarized in Attachment A, instructional review committees comprised predominantly of teachers, teacher leaders and central office content specialists, with the majority of the participants being teachers, reviewed elementary instructional materials for potential use in District schools and found the following to meet the standards for adoption. Therefore, the following instructional materials are recommended for adoption by the Governing Board: *FOSS Next Generation* published by Delta Education;

**WHEREAS**, expenditures, pursuant to an Agreement between the District and Delta Education, shall not exceed the total amount of $1,793,050.15 for the period May 9, 2018 to June 30, 2020, for the purchase of elementary instructional materials related thereto:

**NOW , THEREFORE, BE IT RESOLVED** that the Board of Education hereby finds that the instructional materials listed in Attachment A meet the standards for adoption and hereby selects the instructional materials listed in Attachment A for use in District schools.

**BE IT FURTHER RESOLVED** that the Board approves the Agreement with Delta Education for the period May 9, 2018 - June 30, 2020 in an amount not to exceed a total of $1,793,050.15 for the purchase of instructional materials related thereto, which Agreement is attached as Exhibit C. The price quote issued by Delta Education, as well as its pricing lists, are attached collectively as Exhibit B, with the stated costs of purchases of the materials pursuant to the quotes and the Agreement as follows:

| Vendor | Qty | Description | Total Price |
|---|---|---|---|
| Delta Education | 916 | NGSS FOSS Kits | $1,127,623.24 |
| | 1,371 | Additional Teacher Materials (to allow rotation of kits) | $291,744.85 |
| | 1,031 | Additional Student Text Packs (to allow rotation of kits) | $87,884.30 |
| | | **Instructional Materials Subtotal** | **$1,507,252.39** |
| | | Estimated Tax and Shipping | $165,797.74 |
| | | **Total for one-time purchase of NGSS FOSS** | **1,673,050.15** |
| | | 2018-19 FOSS Kit Refurbishment Supplies | $60,000.00 |
| | | 2019-20 FOSS Kit Refurbishment Supplies | $60,000.00 |
| | | **Total for 2018 - 2020** | $1,793,050.15 |

**Passed by the following vote:**

**PREFERENTIAL AYE:** Gema Quetzal (Student Director)
**PREFERENTIAL NOE:** None
**PREFERENTIAL ABSTENTION:** None
**PREFERENTIAL RECUSE:** None
**AYES:** Jody London, Nina Senn, Roseann Torres, Vice President Jumoke Hinton Hodge
**NOES:** James Harris
**ABSTAINED:** Shanthi Gonzales
**RECUSE:** None
**ABSENT:** President Aimee Eng

**CERTIFICATION**

**We hereby certify that the foregoing is a full, true and correct copy of a Resolution passed at a Regular Meeting of the Board of Education of the Oakland Unified School District, held on May 9, 2018.**

**OAKLAND UNIFIED SCHOOL DISTRICT**

Aimee Eng

**Aimee Eng**
**President, Board of Education**

**Kyla Johnson-Trammell**
**Superintendent and Secretary, Board of Education**

OAKLAND UNIFIED SCHOOL DISTRICT
Office of the General Counsel
APPROVED FOR FORM AND SUBSTANCE
By: _____ 5/2/18
Michael L. Smith, Attorney at Law

OUSD or the District verifies that the Contractor does not appear on the Excluded Parties List at https://www.sam.gov/

# Exhibit A

OUSD K-5 NGSS Curriculum Proposal


# K-5 NGSS Curriculum Proposal

**Oakland Unified School District**

**October 2017**

*v: 6.17.17*

## Table of Contents

## K-5 NGSS Curriculum Proposal
## Executive Summary

The OUSD Science Department has been preparing for the full implementation of NGSS curriculum since 2012. In 2016-2017, the OUSD Science Department invited three top NGSS curriculum providers to present materials at four teacher and community engagement events in four different Oakland neighborhoods. At these sessions, educators and community members from 39 of our 54 elementary schools submitted feedback on the three programs. Of the 67 Oakland educators who submitted written feedback to the OUSD Science Department, 65 (97%) ranked NextGen FOSS as their first choice.

In addition to being overwhelmingly preferred by district teachers, with unprecedented consensus, FOSS has a proven record of being highly effective for teachers and students for over a decade in Oakland. We see a huge financial and operational benefit to continuing with the new NGSS-edition of FOSS, since

(1) OUSD already owns hundreds of thousands of dollars of hands-on materials that would not have to be re-purchased,

(2) OUSD has the operational capacity and infrastructure to support materials distribution and maintenance, and

(3) All 54 elementary sites in OUSD have the instructional capacity through Science Teacher Leaders to support a smooth transition to the new edition of a familiar and trusted curriculum, which will enable teachers to quickly move from base level implementation to high-level, data-driven instruction in science.

As such, it is the professional recommendation of the OUSD Science Department to pilot only the NextGen FOSS curriculum in a select number of schools during the 2017-2018 school year with the intent to submit NextGen FOSS to the OUSD Board of Trustees for adoption in 2017-2018 and district-wide implementation in 2018-2019.

## Background

For nearly a decade, the Oakland Unified School District's Science Department has developed to become a national leader in urban science education. The science department focuses on nurturing students' curiosity and scientific understanding of our world in order to address personal, community and global issues. Over the course of the last ten years we have:

- Helped 1000 Teachers implement a science curriculum each year
- Facilitated collaborative learning for 70 site-based teacher leaders per year
- Presented over 30 workshops at state and national conferences
- Hosted 600 district leaders from over 50 school districts at three annual NGSS Symposiums
- Developed training and observation materials for district teachers and principals

At the core of the Elementary Science Program has been the Full Option Science System (FOSS), developed at the Lawrence Hall of Science and adopted by the Oakland Unified School District in 2008. Originally developed as a program for visually and hearing impaired students, FOSS is a research-based, award-winning science curriculum that has served children across the nation for over 40 years. The FOSS Program bridges research and practice by providing tools and strategies to engage students and teachers in enduring experiences that lead to deeper understanding of the natural and designed worlds.

With support from the S.D. Bechtel Jr. Foundation, a complex operational system has been established to the support the implementation of the FOSS curriculum--including 2 cargo vans, a warehouse, 3,600 boxes of materials, teacher leaders from every elementary school, and a central Science Department. Each year over 10,000 human hours are spent refurbishing and moving FOSS kit boxes between schools and the SMART Center warehouse to ensure every child in every classroom in OUSD has the materials they need for hands-on science.

The edition of FOSS currently used in OUSD schools is aligned to the 1998 California Science Standards. Since the adoption of FOSS in 2008, two newer editions of FOSS have been published, including NextGen FOSS--aligned to the Next Generation Science Standards.

## Next Generation Science Standards

Since 2011, the year that the Framework for K-12 Science Education was released by the National Research Council (NRC) of the National Academy of Science, the OUSD Science Department has been preparing for the transition of our schools to the Next Generation Science Standards (NGSS). (See Appendix A—NGSS Executive Summary.)


The NGSS call for major shifts in the way science is experienced by K-12 students. They include:

1. Connecting and applying science to the real world
2. Aligning with Common Core State Standards
3. Building coherently, K-12
4. Integrating science and engineering
5. Engaging students in "three-dimensional learning" in which students apply the three dimensions of the NGSS--the Disciplinary Core Ideas, the **Science and Engineering Practices,** and the **Crosscutting Concepts**--to understanding phenomena.

The OUSD Science Department began the transition by analyzing the shifts in the NGSS and determining which shifts are dependent on having new curricular materials and which could be implemented using the current curriculum, the Full Option Science System (FOSS) developed at the Lawrence Hall of Science and adopted as the K-5 science curriculum in OUSD in 2008.

A theory of action was developed for transitioning schools to the Next Generation Science Standards. The transition plan would take place in three phases.

| Phase 1: Initiation (2011-2013) | Phase 2: Transition (2013-2017) | Phase 3: Implementation (2017-Future) |
|---|---|---|
| Introduce Science and Engineering Practices to Teacher Leaders, Principals, and Cohort/Focus schools. | Implement *most* Science and Engineering Practices using FOSS and SIRA | Implement *all* Science and Engineering Practices with NGSS curriculum |
| | Introduce *some* Disciplinary Core Ideas where possible through the SIRA and 2007 Edition of FOSS | Fully implement *all* Disciplinary Core Ideas with NGSS curriculum |
| | Introduce Crosscutting Concepts to Teacher Leader and Principals, and include in the SIRA, where possible. | Implement *all* Crosscutting Concepts with NGSS curriculum |

## OUSD K-5 NGSS Implementation Timeline

| Date | California | OUSD Science |
|---|---|---|
| 2011 | | OUSD Science Department analyzes the Framework for K-12 Science Education and develops initial NGSS transition plan |
| 2012 | | Teacher leaders, principals, and cohort/focus schools engage in NGSS learning with a focus on the Science & Engineering Practices |
| 2013 | California adopts NGSS as new K-12 science standards | OUSD joins NGSS Early Implementation Initiative of the K-12 Alliance, a WestEd program, with 9 districts from across California<br>OUSD NGSS Core Leadership Team forms (K-8 principals, teachers, T&L staff)<br>SIRA 3rd grade developed & piloted |
| 2014 | CA NGSS Framework Committee Developed | SIRA 3rd grade implemented district-wide<br>SIRA 4th grade developed & piloted |
| 2015 | | SIRA grades 3-4 implemented district-wide<br>SIRA 5th Grade developed & piloted |
| 2016 | CA NGSS Framework Finalized | K-2 SIRA Elements developed & piloted<br>CLTs from 9 participating districts in the Early Implementation Initiative met to review curriculum from 8 publishers<br>Teachers on CLTs pilot full units of NGSS curriculum |
| 2017 | CAST Assessment Pilot (5th, 8th, HS) | Open Forum held for all OUSD teachers to review curriculum materials<br>Selected program(s) field tested |
| 2018 | CAST Assessment Field Test (5th, 8th, HS) | OUSD adopts NGSS curriculum<br>Science Department prepares for reorganization of the SMART Center warehouse, prepares NGSS-aligned assessment plan, and develops professional learning plan for all K-5 teachers |
| 2019 | CAST Assessment Implementation (5th, 8th, HS) | NGSS curriculum implemented district-wide |

## NGSS Implementation: Initiation (2011-2012)

First, the OUSD Science Department would build capacity and develop tools to support the implementation of two of the three dimensions of the NGSS--the **Science and Engineering Practices** and the **Crosscutting Concepts**--by layering them onto the existing FOSS curriculum.

This would be achieved with three levers:

1. Teacher Leadership
2. Principal Training
3. In-depth support of Cohort/Focus Schools

From 2007-2017 Teacher Leaders from every site have attended monthly or bimonthly meetings with the Science Department, in which they engage in science learning--both content and pedagogy of the NGSS--leadership development, and logistical support. (See Appendix B.)

Beginning in 2011, Principals learned about the shifts in NGSS through extensive professional learning conducted by the science department. (For an overview of the 30 hours of principal professional learning in 2011-2012, see Appendix C.) Since that time, professional learning has been ongoing, and has broadened to include Learning Walks in which principals look for observable indication of NGSS-aligned instruction using the 5 x 9 card introduced in 2012 (see Appendix D), or the NGSS Transitional Standards and Principal Toolkit introduced in 2017 (see Appendix E.)

To support deep implementation of the NGSS, the Science Department would provide intensive support--classroom coaching, leadership support, and ongoing professional development--to groups of schools across the district. Thirteen schools participated in the Science and Literacy Cohort from 2012-104. (See Appendix F.) Eight schools participated as Science Focus Schools in 2014-2015. (See Appendix G.)

## NGSS Implementation: Transition (2013-2017)

Beginning in 2013, with support from the S.D. Jr. Bechtel Foundation, the Science Department began developing tools to introduce all three dimensions of the Next Generation Science Standards, in part, to every classroom in OUSD. These tools came to be known as the Science Instructional Reflection and Assessment (SIRA).

**SIRA**

The Science Instructional Reflection and Assessment (SIRA) was designed as a transition strategy to prepare elementary teachers and students for the exciting shifts of the newly adopted Next Generation Science Standards (NGSS). Developed by OUSD's Elementary Science Team in partnership with veteran OUSD teachers, the SIRA is an instructional sequence that helps focus and deepen the teaching of FOSS science modules, while emphasizing the Science Practices called for in NGSS. The SIRA is anchored by clear learning goals, encourages frequent formative assessment, and leads to a concise summative assessment for FOSS science modules. The SIRA is to be used hand-in-hand with our current FOSS modules. (See Appendix H.)

Through the creation and implementation of the SIRA, the OUSD Science Department and OUSD teachers engaged in learning and implementation of some of the dimensions of the Next Generation Science Standards. The SIRA instructional plans layered the Science and Engineering Practices and Crosscutting Concepts of the NGSS onto the existing FOSS curriculum.

The SIRA begins with a conceptual framework that tightly outlines the most important science ideas, science practices, and crosscutting concepts addressed in a particular FOSS module. This map serves as the anchor for subsequent sections of the SIRA. The conceptual framework contains our NGSS Transitional Standards. The science ideas (Big Idea and Supporting Concepts) in the SIRA conceptual framework are derived from the 1998 CA Science Standards, since the FOSS kits that teachers have in their classrooms are based on these standards. To use the core ideas from NGSS would require grade levels to obtain new materials tied to those ideas. Until we adopt new NGSS-aligned curriculum, we will use our current FOSS kits, teach the ideas/content from those kits, and fold in the NGSS science practices and crosscutting concepts through the SIRA.

As such, the SIRA serves as a transition tool and does not support *full* implementation of the Next Generation Science Standards. Full implementation of the new standards requires adoption and implementation of new NGSS-aligned curriculum.

**Selection of NGSS Curriculum Options**

In addition to the development of the SIRA, in 2013 the OUSD Science Department joined with nine other districts across California in the NGSS Early Implementation Initiative, a multi-year project of the K-12 Alliance to support the implementation of the NGSS.

Through this collaboration, the Science Department assembled an NGSS Core Leadership Team (CLT) comprised of district leaders, principals, and teachers who would create a multi-faceted, multi-year NGSS Implementation Plan, which was approved by Superintendent Antwan Wilson in 2015. (See Appendix I.) Part of the work of the CLT has been to participate in NGSS curricula review with the CLTs from the other nine participating districts.

In January 2016, CLT members from all participating districts heard presentations and reviewed materials from eight major publishers of NGSS curriculum programs. They were:

1. AMNH (American Museum of Natural History)
2. Amplify
3. NextGen FOSS
4. Gizmos-ExploreLearning
5. IQWST, Activate Learning
6. National Geographic
7. STC, Smithsonian Science Education
8. STEMscopes

In Spring 2016, classroom teachers on the Core Leadership Teams of all nine districts piloted full units from the eight programs in their classrooms. Feedback was collected by the K-12 Alliance and shared with participating districts for the purposes of informing local curricula selection processes. The three top-rated programs were invited to Oakland for curriculum review. The three programs represented were Amplify Science from the Lawrence Hall of Science, NextGen FOSS from the Lawrence Hall of Science, and STEMscopes from Rice University.

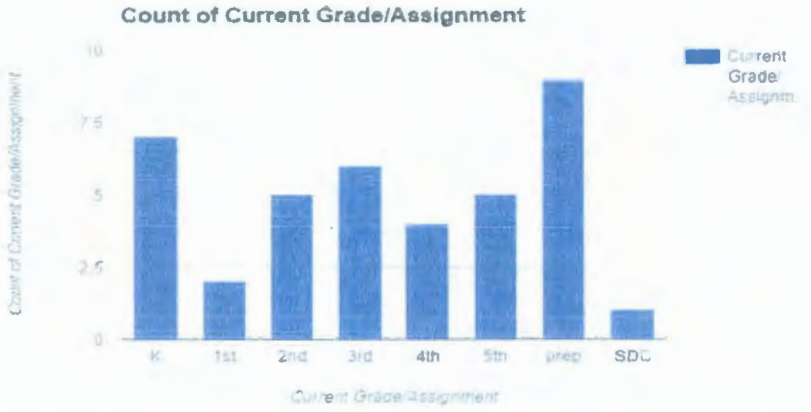
All three programs are aligned to the Next Generation Science Standards, include hands-on learning, and utilize Science Notebooks for student. All three programs are affiliated with University-based research institutions.

**Curriculum Review Session**

In May 2017, representatives from the top three programs for grades K-5 were invited to present to a public forum of OUSD teachers. All three publishing companies flew representatives to Oakland to present their full curriculum to OUSD teachers, including hands-on materials, teacher guides, student books, and online resources.

Electronic and paper fliers were distributed to all teachers at all 54 elementary school sites through the Lead Science Teacher. (See Appendix J.) Initial notices were sent out over a month in advance, with follow-up reminders one and two weeks before.

The event was attended by 42 teachers from 38 different schools, or 72% of schools in the district. There were teachers representing every grade, K-5 including special education teachers.

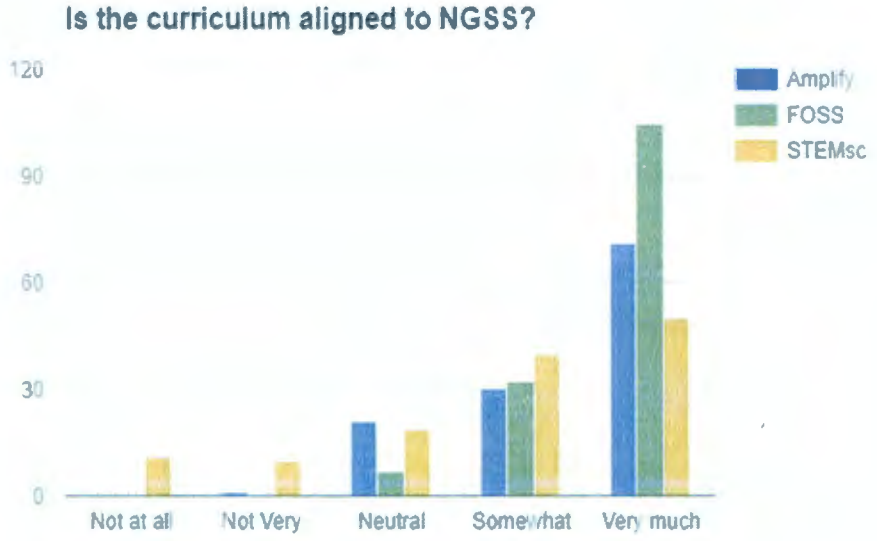



Over half of the teachers in attendance have taught in OUSD for 10 or more years. 42 teachers in attendance, 40 currently serve as the Lead Science Teacher at their site. The Lead Science Teachers are the people primarily responsible for supporting site-level implementation of science through the areas of advocacy, collaboration, modeling, and providing resources.

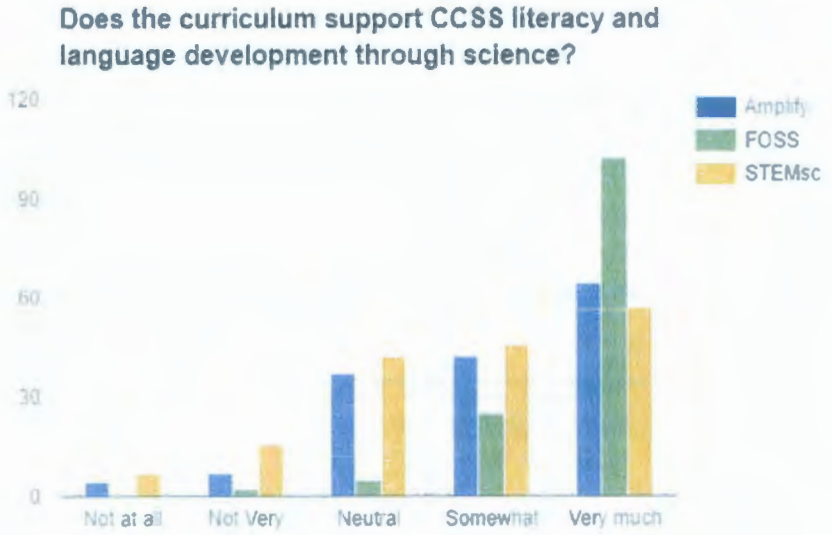
The teachers each heard presentations from all three curriculum providers and had the opportunity to review instructional materials for each program. Feedback was collected on a feedback form designed by the OUSD Science Department. The feedback form is informed by the EQuip rubric for NGSS materials published by Achieve (see Appendix K) and the mission and vision of OUSD Science (see Appendix L).

This feedback form had teachers rate programs in six different areas: (1) NGSS Alignment, (2) Language, Literacy, and Common Core Connections, (3) Equity, (4) Student Materials, (5) Assessment, (6) Usability. (See Appendix M.) Teachers were given hard copies of the feedback forms for the purpose of note-taking during the presentations by the curriculum providers. Final feedback was collected electronically.

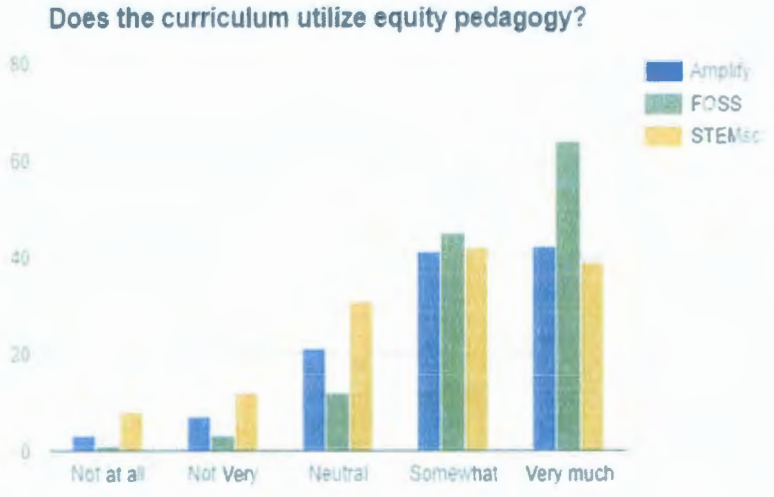
In the category of NGSS Alignment, teachers were asked to rank the programs on a scale of 1-5 with the following questions: Does the curriculum provide experiences with phenomena that support deep conceptual learning? Does the curriculum have students discussing open-ended questions that focus on the strength of the evidence used to generate claims? Are Science & Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts woven together so that student tasks reflect the ways that real scientists do and think about science? Is there a clear Scope and Sequence or Concept Map that shows NGSS learning progressions? On all questions in the category of NGSS alignment, NextGen FOSS was rated the highest.



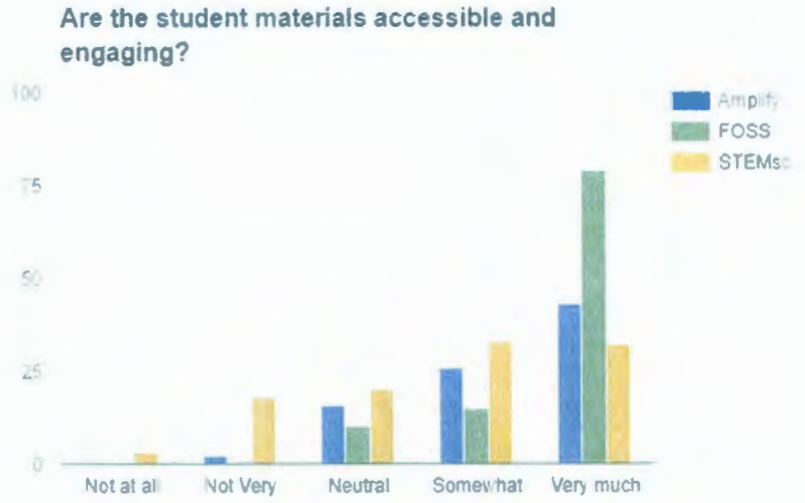
In the category of **Language, Literacy, and Common Core Connections** teachers were asked: Does the curriculum include embedded supports for language development? Are there frequent opportunities to write in Science Notebooks for a variety of purposes, such as collecting data, developing, using, and revising models, constructing explanations based on evidence, and reflecting on their learning? Does the curriculum include frequent opportunities for students to engage in discussion and argumentation to make sense of data and deepen their understanding? Will students read complex text *after* their investigations to deepen their understanding? Does the curriculum provide supports for mathematical thinking & data analysis? On all questions, NextGen FOSS was rated the highest.



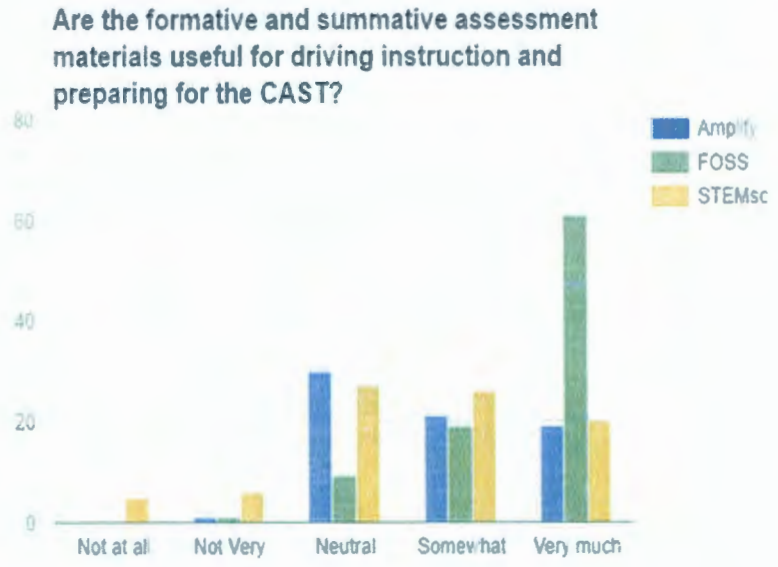

In the category of **Equity Pedagogy**, teachers were asked the following: Do the learning experiences hook into students' prior knowledge? Do the learning experiences seem relevant to the lives of the students you teach? Do the print materials reflect the diversity of our school communities? Are student materials available in languages other than English? NextGen FOSS was rated the highest.



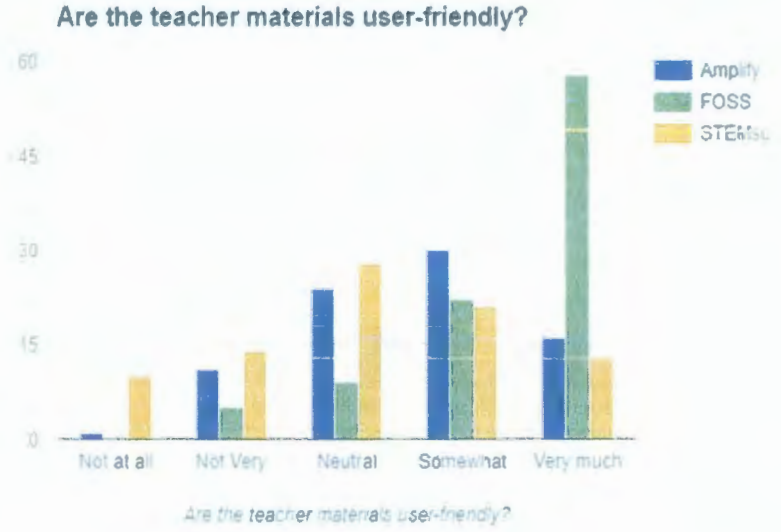
In the category of **Student Materials,** teachers were asked: Will all students be able to access the materials? Does the curriculum include traditional tools of science (e.g. hand lenses and measuring devices) and common objects so that students can see opportunities for science in their everyday lives? Do the reading materials allow students to build on ideas from their hands-on experiences? NextGen FOSS received the highest marks in this category by Oakland teachers.



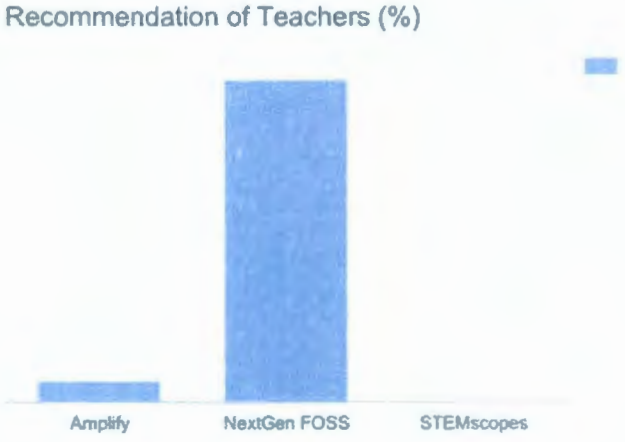

In the category of **Assessment**, teachers were asked: Do the assessments (formative and summative) provide information about both conceptual understanding and skills (e.g. Science and Engineering Practices)? Does the curriculum provide guidance for how to use the assessment data? Are the summative assessments easily administered (e.g. within one session)? OUSD teachers ranked NextGen FOSS as having the strongest and most usable assessment program.



In the final category of **Usability**, teachers were asked: Are the teacher materials user-friendly? Do you think you could use the teacher materials without having had any training? Are the teacher materials available in languages other than English? Teachers again ranked NextGen FOSS the highest of any program. However, in this category FOSS received some lower marks since, although student materials are all available in English and Spanish, the Teacher Guides are only available in English. This presents a challenge for teachers providing science instruction in Spanish.




Overall, of the teachers who reviewed the programs, 94% recommended NextGen FOSS for adoption by OUSD, 6% recommended Amplify for adoption by OUSD, and 0% recommended STEMscopes for adoption by OUSD.



Some comments from teachers were:

- I like FOSS and it seems as if the changes made go along with many of the practices that we have been trying to do- more note booking, discussions, more outdoor science, and more engineering. The program emphasizes hands-on experiences which is important for concept building.

- I really like that FOSS is easy for teachers and students to access. They are direct and to the point. The hands on activities are versatile and lend themselves to a lot of questioning, talking, and writing.

- The new revisions in the new Foss are relevant and inclusive of all learners, in particular English language Learners.

- FOSS, FOSS, FOSS! :0)

- I want to pilot the Spanish version at my site.

- I think FOSS aligns very well with our vision of science education in Oakland. The focus questions, investigations and notebooking are excellent. I am excited about the increased outdoor education, and EL notes in each lesson, and the next steps after you assess students.

**Community Engagement Sessions**

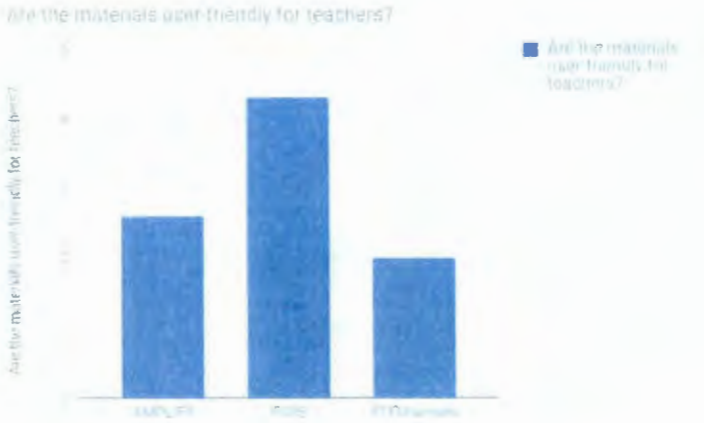
In June, three additional community engagement sessions were held to engage more teachers and community members and ensure that feedback was gathered from teachers who are not the site Lead Science Teacher and may not have had extensive science training or familiarity with NGSS. The first session was held on the Stonehurst campus of Esperanza Elementary and Korematsu Discovery Academy in East Oakland. The second session was held in central Oakland at Crocker Highlands. The third session was held in West Oakland at Hoover Elementary. In total, 25 teachers and community members attended, including teachers, principals, volunteers, and a literacy coach.

A modified feedback form was used to collect more summative feedback, with a focus on usability by teachers and students. These events were publicized through the OUSD communications department in order to reach all stakeholders. (See Appendix N.)

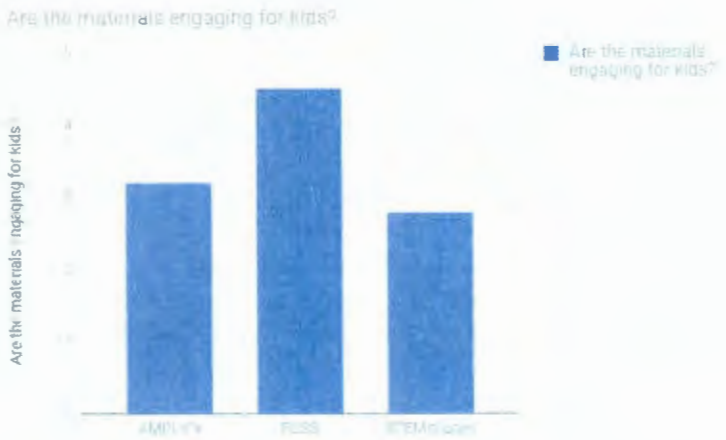
At these sessions, instructional materials (both teacher-facing and student-facing materials) from Amplify, NextGen FOSS, and STEMscopes were on display. The materials displayed all corresponded to the same specific grade-level and standards, for ease of comparison. Additionally, at all sites a Chrome book cart was made available so that participants could view the online materials for all grade levels, K-5. (See Appendix O for login information.) A simplified feedback form was provided in English and Spanish, with an emphasis on accessibility for teachers and students. (See Appendix P.)

In total, twenty-six individuals attended the events. The majority were classroom teachers. (See Appendix Q for sign-in sheets.) Some participants came specifically to see the new FOSS instructional materials. Of those participants who completed the feedback form, **100% ranked NextGen FOSS as their top preference**.

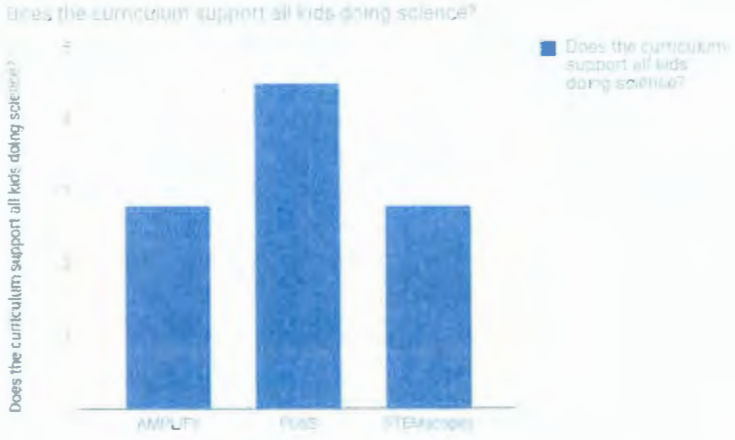
When asked to rate the Amplify, FOSS, and STEMscopes on whether the materials were user-friendly for teachers on a scale of 1 - 5, FOSS was rated the highest.



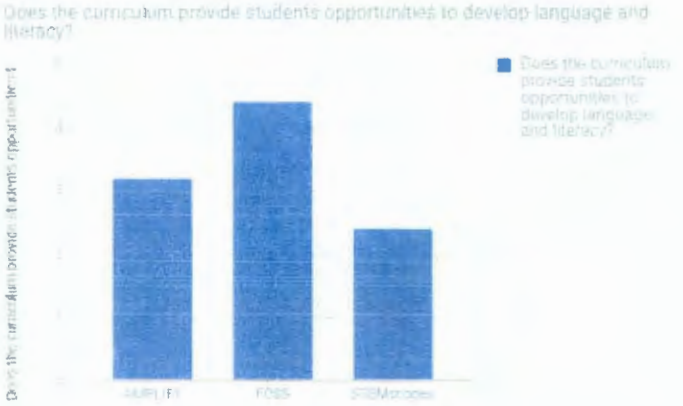

When asked how engaging the materials looked for students on a scale of 1 - 5, FOSS was rated the highest.




When asked how well the curriculum would support all students on a scale of 1 - 5, FOSS was rated the highest.



When asked how well the curriculum would provide students with opportunities to develop language and literacy through science on a scale of 1 - 5, FOSS was rated the highest.




One teacher said on the feedback form of FOSS, "I like the continuity. I like the [teacher] guides. I like the student textbooks." Another teacher said about FOSS, "New layout of the teacher's guide is really nice--much more concise and usable."

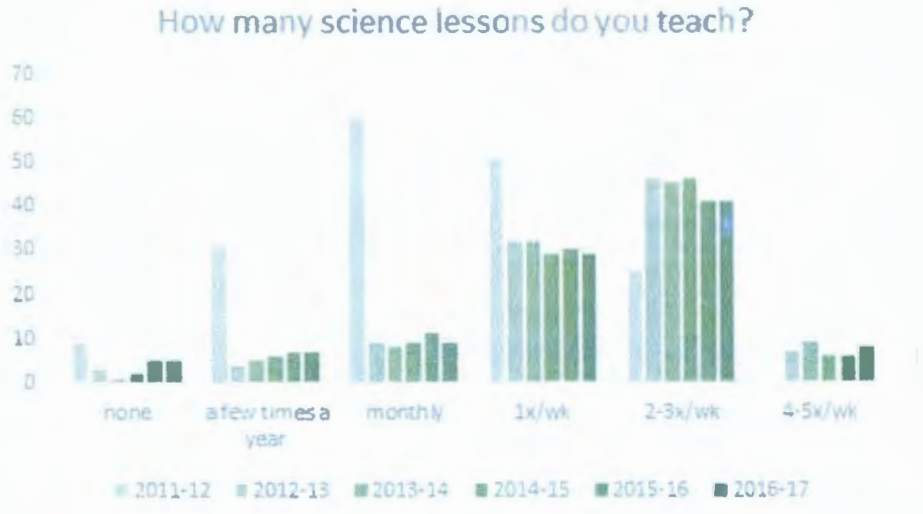
## Analysis

### Teacher Feedback

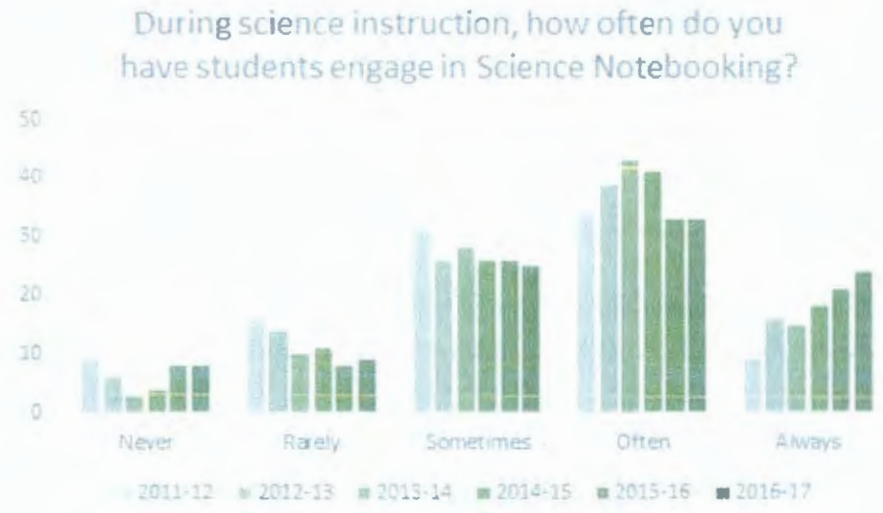
The data from all four curriculum review sessions show that there is overwhelming consensus and support for OUSD to adopt the new NGSS edition of the familiar and trusted FOSS curriculum. At the review sessions, both new teachers and the most experienced teachers--the Lead Science Teachers (who ultimately will be responsible for supporting new science curriculum at the site level) ranked NextGen FOSS as their first choice. Of the teachers who submitted feedback, 97% ranked FOSS above the other curriculum options overall, and 100% of respondents ranked as high or higher than the other programs in every single category.

### Quality

For over a decade FOSS has been instrumental in increasing both the quantity and quality of science instruction for Oakland students. To determine the quantity of science instruction taking place in OUSD elementary classrooms, the Science Department has been collecting data through an annual teacher survey. The anonymous surveys are collected by the Lead Science Teachers at each site, with an annual response rate of 60% - 70% of all elementary teachers each year. Since 2011, the amount of students receiving science 3-5 times per week has steadily increased, while the amount of students receiving science once a week or less has decreased.



One indicator of quality of science instruction is how often students engage in Science Notebooking, a foundational pedagogical practice for student meaning-making, developing evidence-based writing, and providing teachers with timely formative assessment data. Since 2011, the amount of students engaging in Science Notebooking has steadily increased, with over a quarter of elementary students always engaging in the practice during science instruction.




In addition to the history of effectiveness of the older edition of the FOSS curriculum in Oakland, the new NGSS edition of FOSS has won critical acclaim across the country. In 2016 the Association of American Publishers (AAP) awarded FOSS Next Generation K–5 Edition won both the 2016 AAP REVERE Award for Whole Curriculum—Science as well as the 2016 AAP REVERE Golden Lamp Award for best Whole Curriculum overall, from any content area.

NextGen FOSS is not just the most preferred curriculum by Oakland teachers, it is also the highest quality curriculum for the Next Generation Science Standards, according to the Association of American Publishers.

**Cost Estimates**

Apart from quality, FOSS is the top choice when considering implementation logistics. Given the current investment in FOSS, including hundreds of thousands of dollars of hands-on materials housed at the SMART Center, NextGen FOSS is the most economical option.

**NGSS Curriculum Materials**
**Cost Estimates for 8 Year Adoption***

| | New Adoption (No Rotation) | New Adoption (Rotation) | Upgrade from Current Curriculum (Rotation) | Annual Materials Replenishment | Annual License Fees | Total Cost for 8 year Adoption |
|---|---|---|---|---|---|---|
| Amplify | 2,883,150 | N/A | N/A | Costs unknown at this time | 132,300 | 3,809,250 |
| NextGen FOSS | 2,741,770 | 1,533,014 | 942,713 | 50,000 | none | 1,292,713 |
| STEMscopes | 1,041,245 | N/A | N/A | 370,550 | 147,150 | 4,665,145 |

* Not included: SMART Center Clerk, van maintenance, SMART Center Interns, Live Organisms, training costs

When looking at implementation costs, there are both the one-time costs for adoption materials (materials kits, student books, and teacher guides) and ongoing costs (materials replenishment and licensing fees for online resources.)

The first column "New Adoption" shows the costs of purchasing a full set of all materials for every classroom in Oakland. Numbers are based on 2017 classroom counts and list prices from all three publishers. (See Appendix R for Pricing Information.)

The second column, "New Adoption (Rotation)," shows the cost of purchasing materials to rotate between schools. The FOSS curriculum is divided into three units, or "FOSS kits," per year at all grade levels K-5. Rather than purchasing all three kits for every class—which would require significant on-site storage, the OUSD purchased between 1/3 and 1/2 of the number of kits needed, which are shared between sites. In any given trimester, 1/3 of the 54 elementary schools in Oakland are using the Life Science kits, 1/3 are using the Physical Science kits, and 1/3 of the schools are using the Earth Science kits. Each trimester, the Science Department spends two full weeks moving kits from one school to another, known as "FOSS Rotation." (See Appendix S for a sample FOSS Rotation Schedule.)

Every summer, all FOSS kits—approximately 3,600 boxes of materials—are returned to the SMART Center for refurbishments. A team of 10 OUSD high school students are employed as SMART Center Interns through the ECCO program of the Linked Learning Department. These students work eight hours a day for eight weeks in the summer in order to prepare all kits for use in the next school year.

The FOSS rotation system has been successfully implemented in OUSD for the last 10 year. The FOSS rotation system reduces the amount of money needed for curriculum adoption as well as ensures that materials will be replenished each year so that all students in every school will have the opportunity to engage in hands-on science throughout the length of the adoption.

While the amount of science instruction for Oakland students has steadily increased since the first adoption of FOSS in 2008 (see graph on p. 16), districts without central systems for materials refurbishment have reported steady decreases in the amount of hands-on science taking place in classrooms in the years following the initial adoption of materials, as sites have varied capacities to maintain the materials.

The adoption cost for NextGen FOSS, with a commitment to maintain a central refurbishment system) is $1,208.756 less than an adoption of FOSS without rotation. It is also less than the costs of its competitors. A rotation system is not an option with STEMscopes, which uses one large materials kit per year, or Amplify, which has different numbers of kits in different grade levels.

An additional for NextGen FOSS is the purchase of "Conversion Kits" which can be purchased to upgrade existing FOSS kits. The "Conversion Kits" include new Teacher Guides, new student books, and materials that were not part of previous editions. This would allow OUSD to continue using the equipment previously purchased by OUSD, such as hand lenses, graduated cylinders, thermometers, etc. This would allow OUSD to save an additional $590,301.

**Recommendation**

Furthermore, by continuing with FOSS, our Oakland teachers will be able to build upon their experience with the FOSS curriculum, so that implementation efforts at the site and district level can quickly move past base level implementation (e.g. how to use the teacher guide and how to access online resources) and instead move into higher level professional development, such as analyzing student writing in science and leveraging opportunities for literacy and language development.

For all of these reasons: (1) teacher buy-in, (2) quality, (3) cost, and (4) implementation logistics, it is the recommendation of the OUSD Science Department to proceed with the adoption and implementation of the NextGen FOSS curriculum in all K-5 classrooms.

## NGSS Implementation: Implementation (2017-2019)

In order to support all students for success on the California Science Test (CAST), the new State assessment of the NGSS, it is essential that classrooms receive NGSS-aligned curriculum in the 2018-2019 school year, in advance of the first operational administration of the CAST. (For details on the CAST, see Appendix T.)

The OUSD Science Department proposes spending the 2017-2018 school year preparing to transition all 54 schools to the NextGen FOSS curriculum.

**NGSS Pilot Cohort**

We intend to work with a small, dedicated cohort of schools to field test the NextGen FOSS modules for the full 2017-2018 school year and provide feedback to the Science Department on matters of instructional time, assessment recommendations, and professional development. We intend to find schools that represent the diversity of Oakland--schools in all regions of Oakland, schools with high numbers of new teachers and schools with a majority of returning teachers, general education teachers and special education teachers, teachers who instruct in English to English Learners and teachers who instruct in Spanish in dual-language programs. We plan to select schools that are willing to dedicate more instructional time to teaching science than the 2010 Board Policy requires in order to meet the Next Generation Science Standards. We plan to select schools that are willing to dedicate significant professional development time to collaboration and learning around the new standards and curriculum, including a cycle of inquiry on science in the first trimester, PLCs dedicated to science each month, and spending the full October Professional Development day with other schools in the NGSS Cohort. (For full description of the Pilot Cohort, see Appendix U.)

Information about the NGSS Pilot Cohort was distributed to all elementary principals in the last weeks of the 2016-2017 school year. The application required commitment to the aforementioned agreements around instructional and professional development time as well as consensus from the teaching staff. With less than two weeks to apply, 25% of OUSD elementary schools applied to be in the cohort, signifying overwhelming interest in transitioning to the Next Generation Science Standards with new FOSS materials.

Although not all 25% of schools can be included in the NGSS Pilot Cohort due to limited resources, all 54 elementary schools will benefit. Through this field test, additional information will be collected by a larger group of teachers and principals.

This information will either inform a recommendation to the OUSD Board of Trustees in Winter 2017 for adoption of the NextGen FOSS curriculum for the 2018-2019 school year, as well as provide essential information to the OUSD Science Department to prepare materials, assessments, and professional development district-wide in 2018-2019.

For additional information, please contact Elementary Science Coordinator Brenda Tuohy at Brenda.Tuohy@ousd.org.

## Appendix A—NGSS Executive Summary


### The Next Generation Science Standards

### Executive Summary

There is no doubt that science—and, therefore, science education—is central to the lives of all Americans. Never before has our world been so complex and science knowledge so critical to making sense of it all. When comprehending current events, choosing and using technology, or making informed decisions about one's healthcare, science understanding is key. Science is also at the heart of the United States' ability to continue to innovate, lead, and create the jobs of the future. All students—whether they become technicians in a hospital, workers in a high tech manufacturing facility, or Ph.D. researchers—must have a solid K–12 science education.

Through a collaborative, state-led process, new K–12 science standards have been developed that are rich in content and practice and arranged in a coherent manner across disciplines and grades to provide all students an internationally benchmarked science education. The Next Generation Science Standards are based on the *Framework for K–12 Science Education* developed by the National Research Council.[1]

*Advances in the Next Generation Science Standards*

- Every NGSS standard has three dimensions: disciplinary core ideas (content), scientific and engineering practices, and cross-cutting concepts. Currently, most state and district standards express these dimensions as separate entities, leading to their separation in both instruction and assessment. The integration of rigorous content and application reflects how science and engineering is practiced in the real world.
- Scientific and Engineering Practices and Crosscutting Concepts are designed to be taught in context – not in a vacuum. The NGSS encourage integration with multiple core concepts throughout each year.
- Science concepts build coherently across K-12. The emphasis of the NGSS is a focused and coherent progression of knowledge from grade band to grade band, allowing for a dynamic process of building knowledge throughout a student's entire K-12 scientific education.
- The NGSS focus on a smaller set of Disciplinary Core Ideas (DCI) that students should know by the time they graduate from high school, focusing on deeper understanding and application of content.
- Science and engineering are integrated into science education by raising engineering design to the same level as scientific inquiry in science classroom instruction at all levels, and by emphasizing the core ideas of engineering design and technology applications.

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[1] The performance expectations were developed using elements from the NRC document and should be cited as, *A Framework for K-12 Science Education*, © 2012, National Academy of Sciences." Moreover, the portion of the standards entitled "Disciplinary Core Ideas" is reproduced verbatim from *A Framework for K-12 Science Education: Practices, Cross-Cutting Concepts, and Core Ideas*. They are integrated and reprinted with permission from the National Academy of Sciences. © 2012, National Academy of Sciences.

## Appendix A—NGSS Executive Summary


- The NGSS content is focused on preparing students for college and careers. The NGSS are aligned, by grade level and cognitive demand with the English Language Arts and Mathematics Common Core State Standards. This allows an opportunity both for science to be a part of a child's comprehensive education as well as ensuring an aligned sequence of learning in all content areas. The three sets of standards overlap and are reinforcing in meaningful and substantive ways.

*NGSS Design Considerations*

In putting the vision of the *Framework* into practice, the NGSS have been written as performance expectations that depict what the student must do to show proficiency in science. Science and Engineering Practices were coupled with various components of the Disciplinary Core Ideas and Crosscutting Concepts to make up the performance expectations. The NGSS architecture was designed to provide information to teachers and curriculum and assessment developers beyond the traditional one line standard. The performance expectations are the policy equivalent of what most states have used as their standards. In order to show alignment and coherence to the *Framework*, the NGSS include the appropriate learning goals in the Foundation Boxes in the order in which they appeared in the *Framework*. They were included to ensure curriculum and assessment developers should not be required to guess the intent of the performance expectations.

*Coupling Practice with Content*

State standards have traditionally represented Practices and Core Ideas as two separate entities. Observations from science education researchers have indicated that these two dimensions are, at best, taught separately or the Practices are not taught at all. This is neither useful nor practical, especially given that in the real world science and engineering is always a combination of content and practice.

It is important to note that the Scientific and Engineering Practices are not teaching strategies -- they are indicators of achievement as well as important learning goals in their own right. As such, the *Framework* and NGSS ensure the Practices are not treated as afterthoughts. Coupling practice with content gives the learning context, whereas practices alone are activities and content alone is memorization. It is through integration that science begins to make sense and allows student to apply the material. This integration will also allow students from different states and districts to be compared in a meaningful way.

*The NGSS are Standards, not Curriculum*

The NGSS are standards, or goals, that reflect what a student should know and be able to do—they do not dictate the manner or methods by which the standards are taught. The performance expectations are written in a way that expresses the concept and skills to be performed but still leaves curricular and instructional decisions to states, districts, school and teachers. The performance expectations do not dictate curriculum; rather, they are coherently developed to allow flexibility in the instruction of the standards. While the NGSS have a fuller architecture than traditional standards—at the request of states so they do not need to begin implementation by "unpacking" the standards—the NGSS do not dictate nor limit curriculum and instructional choices.

## Appendix A—NGSS Executive Summary

*Instructional Flexibility*

Students should be evaluated based on understanding a full Disciplinary Core Idea. Multiple Scientific and Engineering Practices are represented across the performance expectations for a given Disciplinary Core Idea. Curriculum and assessment must be developed in a way that builds students' knowledge and ability toward the performance expectations. As the NGSS are performances meant to be accomplished at the conclusion of instruction, quality instruction will have students engage in several practices throughout instruction.

Because of the coherence of the NGSS, teachers have the flexibility to arrange the performance expectations in any order within a grade level to suit the needs of states or local districts. The use of various applications of science, such as medicine, forensics, agriculture, or engineering, would nicely facilitate student interest and demonstrate how scientific principles outlined in the *Framework* and NGSS are applied in real world situations.

Next Steps

With the final release of the NGSS in April 2013, states will begin their individual processes to consider adoption. The lead states are under no obligation to adopt, only to seriously consider adoption. There is no set timeline for adoption or implementation. As with all K-12 educational standards, the decision to adopt by any given state is voluntary.

**Appendix B—Science Teacher Leadership in OUSD: Roles, Responsibilities, & Benefits**

# Science Teacher Leadership in OUSD
# 2016-2017 Roles, Responsibilities, & Benefits

## Description

Science Teacher Leaders continue to serve as lead learners in their content, playing a critical role in the development of site-based leadership to support the transition to the Next Generation Science Standards. Science Teacher Leaders collaborate to improve science instruction, advocate in the service of effective science instruction, model effective science practices, and provide resources. They exercise their influence in formal and informal contexts, maintain a growth mindset, and support Professional Learning Community structures within their schools.


For 2016-2017, the instructional focus will be based on the NGSS pedagogical shifts, with particular attention to writing with evidence, quality lesson design and inquiry, small group instruction, and academic social emotional learning. Leaders will use the Student Indicators of High Quality Science Learning to gauge student learning.

## Roles and Responsibilities

- Serve on the site Instructional Leadership Team (ILT), which meets a minimum of once a month.
- Support implementation and revision of the site plan with administration and ILT to improve instruction and student achievement.
- Work with ILT to facilitate site-based professional learning and site-based inquiry cycles. This can include department meetings, collaboration sessions, or lesson study focused on the implementation of NGSS.
- Serve as an advocate and point person for instructional shifts in science at school sites, and coordinate with other Teacher Leaders to support cross-content pedagogical shifts in the classroom.
- Support grade level teams of teachers as they engage in collaborative instructional planning cycles around the instructional shifts.
- Promote and foster a culture of collaboration and collective responsibility for teaching and learning.
- Open her/his classroom to colleagues and invite them to learn together. Model a disposition of continuous learning and reflection
- Communicate information shared and learned from Science TL meetings with school staff in a timely way.
- Use OUSD Google email/calendar/documents for communication.
- TK-5 Teacher Leaders also:
    - Coordinate the delivery and pickup of the FOSS kits
    - Submit inventory forms for missing materials at the start of each trimester
    - Order live organisms before the start of the life science rotation for the school

## Activities

- All K-12 Science Teacher Leaders attend 6 professional learning sessions, from 4:00-6:00 pm on:
    - August 18, 2016 at the Oakland Zoo
    - September 22, 2016 at Chabot Space and Science center
    - November 3, 2016 at Chabot Space and Science Center
    - January 5, 2017 at the Oakland Zoo
    - March 2, 2017 at the Oakland Zoo
    - May 4, 2017 at the Oakland Zoo
- TK-5 Science Teacher Leaders attend one Live Organism meeting during their school's FOSS Life Science rotation, from 4:30-6:00 pm at the SMART Center on:
    - August 25, 2016 (fall)

# OUSD Elementary Principal Science Professional Development

Components for Each Session

1. Building a collective identity in support of science education
2. Engage in a science activity as learners
3. Provide opportunities for reflection and application of content
4. Create a vision and plan for science education in Oakland
5. Build on existing individual and collective knowledge, and previous sessions

| Date* | | September 13 | October 11 | January 24 | February 21 or 28 | March 27 | May 22<br>June 19/20 |
|---|---|---|---|---|---|---|---|
| Themes | | Science as a Schoolwide Focus | Framework for Science Education | Science & Literacy | Communities of Science Learners | Science & Equity | A Schoolwide Science Program |
| Outcome | | Develop school science goals for 2011-12 | Understand and apply a science framework to the school plan | Identify and integrate strategies for literacy and science instruction | Use the community to improve science at each school | Address opportunities for equitable science participation and achievement | Create a vision and a plan for a schoolwide science program |
| Topics and Activities | Conditions | • Welcome and Introduction<br>• Framing the Series<br>• Addressing Concerns and Challenges | • Principal Panel (Schedules & Structures for Science) | • Teacher Panel (Science Instruction & Implementation) | • Site Visits by Regions<br>• Debrief on Site | • Startling Statements/Clickers<br>• High School Student Panel | • Invite Lead Science Teachers to Attend<br>• Building Teacher Leadership Capacity<br>• Reflections on the Past Year |
| | Culture | • Activity – Mixtures and Solution Investigation (Inquiry, Exploration)<br>• Reflection and Sharing on School Science Goals | • Activity - Marshmallow Challenge (Team Building, Engineering Design) | • Video Analysis of a Science Lesson<br>• Video of PLC – Teachers Talking About Science, Planning and Outcomes | • Parent & Community Involvement | • Small Group and Large Group Discussion of Site Based Challenges<br>• Courageous Conversations | • Activity – Magnet Investigation (The Role of The Teacher)<br>• Teacher Leadership<br>• Reading - *Science Education Leadership*<br>• Partner Schools |
| | Competency | • Science Inquiry<br>• District Science Overview<br>• Science Continuum and Framework for School Change | • National Science Framework and the Common Core<br>• K-5 Articulation | • Activity – Syringe Investigation (Role of Language, Notebooking)<br>• Academic Language and Literacy<br>• Observation Tools | • 5x8 card -observation tool<br>• Learning walks | • CST Analysis by Site and District<br>• *What is Equity in Science?* Reading/Jigsaw | • Revisiting The Science Continuum and Framework for School Change<br>• Planning for Next Year |
| Support Between Sessions | | • Introduce Specialist to Principals and LSTs<br>• Site-Based PD | • Site-Based PD<br>• Meeting in Regional Teams | • Classroom Observations<br>• Site-Based PD | • Site-Based PD | • Site-Based PD | • Site-Based PD |
| Schools Resources | | Field Trips<br>Weekend Walkabout<br>DonorsChoose<br>Outdoor Education | Community Resources for Science | Science Fair | Volunteers<br>Family Science Night<br>Science Horizons<br>Faith Network | Dinner With A Scientist | Summer Opportunities for Teachers |

* Updated February 17, 2012

## Appendix D—Science 5x8 Card

# Practices for High Quality K-12 Science Education

The Next Generation Science Standards (NGSS) define eight scientific and engineering practices for students as they engage in science learning. Not all practices will be evident every time, in every activity. Evidence of the practices exists through student activities and interactions. See reverse for student behaviors.

## Scientific and Engineering Practices

1. Asking questions and defining problems
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data
5. Using mathematics and computational thinking
6. Constructing explanations and designing solutions
7. Engaging in argument from evidence
8. Obtaining, evaluating, and communicating information

A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas (2011). National Research Council
http://www7.nationalacademies.org/bose/Standards_Framework_Homepage.html

# K-12 Science Learning Principles and Actions

| Principles (Practices) | Vital Student Actions |
|---|---|
| 1. Questions guide inquiry *(1, 4, 8)* | Students **ask** meaningful **questions** relevant to the science topic or lesson. |
| 2. Learning occurs through investigations *(1, 2, 3, 4, 5)* | Students use materials, tools, and texts to **explore**, **gather data**, and **answer questions**. |
| 3. Explanations are evidence-based *(2, 4, 5, 6, 7, 8)* | Students use evidence to **interpret** observations, **support** ideas, and **construct** explanations. |
| 4. Science is a community endeavor that evolves with new evidence *(4, 5, 6, 7, 8)* | Students **collaborate** to build understanding and **revise** their thinking when presented with new evidence. |
| 5. Application is essential for building understanding *(1, 2, 3, 6)* | Students **apply** science knowledge *and* practices to respond to open-ended and novel problems. |
| 6. Academic success depends on academic language | Students use discipline-specific **academic language**, **models**, and **mathematics** to communicate understanding **orally** and in **writing**. |
| 7. ELs develop language through content | English learners produce language that **communicates** ideas and reasoning, even when that language is imperfect. |
| 8. Equitable participation | All students are **engaged** in learning and **choose** appropriate **scaffolds** for learning. |

Oakland Unified School District, Science Department — Version 2.4 - November 25, 2012

**Appendix G—Excerpt from *NGSS Transitional Standards & Leadership Toolkit***

OUSD Science

## OUSD NGSS Transition Guide for Elementary Schools: The SIRA

The Science Instructional Reflection and Assessment (SIRA) was designed as a transition strategy to prepare OUSD K-5 elementary teachers and students for the exciting shifts of the newly adopted Next Generation Science Standards (NGSS). Developed by OUSD's Elementary Science Team in partnership with veteran OUSD teachers, the SIRA is an instructional sequence that helps focus and deepen the teaching of FOSS science modules, while emphasizing the science practices and crosscutting concepts called for in NGSS. The SIRA is anchored by clear learning goals, encourages frequent formative assessment, and leads to a succinct summative assessment for FOSS science modules in grades 3-5. The SIRA is to be used hand-in-hand with our current FOSS modules. The K-2 version of the SIRA is called SIRA Elements, since it is slightly more concise and does not contain a summative assessment.

### Why the SIRA?

The Elementary Science Team is driven by a vision that all Oakland students enter middle school with a solid understanding of key scientific principles and practices. This is a minimum requirement for participating in a democratic society, where science plays an important role around issues of health, safety, and well-being. Further, we strive to ensure that all Oakland students, regardless of race/ethnicity, socio-economic status, or language learner status, gain access to and succeed in the highest levels of high school science offered here in OUSD, the Advanced Placement (AP) courses. Currently, a disproportionately low number of African American and Latino students enroll in these classes, and even fewer receive passing grades on the end-of-year AP exams. This reality is unacceptable, given that it maintains a status quo where the vast majority of science-based career opportunities remain out of reach for many of our youth. We see this as a social justice issue and one that we have the capacity, as educators working collaboratively, to address right now.

To that end, the SIRA was designed to support teachers in understanding their NGSS-aligned learning goals more deeply so that they may ensure that students are meeting those goals and will succeed in classrooms, college, and career. Furthermore, the SIRA expands opportunities for language and literacy development through the rich context of science, thereby reflecting the goals of the CA-ELD Standards, CCSS-ELA, and NGSS.

### What is the SIRA?

*Conceptual Framework.* The SIRA begins with a conceptual framework that tightly outlines the most important science concepts, Science Practices, and Crosscutting Concepts addressed in a particular FOSS module. This map serves as the anchor for

subsequent sections of the SIRA. The science concepts (Big Idea and Supporting Concepts) in the SIRA Conceptual Framework are derived from the 1998 CA Science Standards and informed by the Disciplinary Core Ideas of the NGSS. The Disciplinary Core Ideas may appear in a different grade level SIRA Conceptual Framework than in the NGSS, since the FOSS kits that teachers have in their classrooms are based on the 1998 CA Standards. To use the Disciplinary Core Ideas from NGSS would require grade levels to obtain new materials. Until we adopt new NGSS-aligned curriculum, we will use our current FOSS kits, teach the content from those kits, and add the NGSS Science Practices and Crosscutting Concepts through the SIRA.

*Instructional Plan and Formative Assessment.* With the conceptual framework as an anchor, a highly focused, lesson-by-lesson instructional roadmap was designed that outlines tightly connected focus questions, key concepts, and learning objectives. Suggestions for assessing each objective through writing or discussion prompts are offered, including optional scaffolds and expected student responses. The most commonly suggested forms of formative assessment are the 10-minute *Reflective Assessment Protocol* for written work, a Science Talk with class checklist for oral assessment, and an Observation Grid for use in K-2 SIRA Elements.

*Summative Assessment.* In grades 3-5, the instructional plan culminates in a single, short (7-10 question) written assessment designed from a pool of existing FOSS assessment items as well as some that were internally-developed. The assessment covers science ideas from FOSS as well as crosscutting concepts and practices from NGSS, with a focus on higher-order thinking skills and evidence-based reasoning as emphasized in the Common Core. Assessment items are mostly short-answer, with occasional multiple choice items. Students are permitted to consult their Science Notebooks during the assessment. Teachers administer the assessment in a single 45-minute period, and teachers individually score them.

The formative and summative assessments may be used immediately by teachers as a classroom learning tool to assess student progress toward mastery of science concepts and practices. Ideally, summative results will show high levels of student understanding due to more consistent formative assessment integrated throughout the module. Completed summative assessments and scores will be collected through Illuminate and the Elementary Science Team will use these to further refine assessment items and improve the assessment's reliability.

Through the SIRA, students will have the opportunity to experience NGSS-aligned science and should be prepared for the new state assessment in science, the California Science Test (CAST).

## Appendix F—Science Literacy Cohort Overview



**Elementary Science and Literacy Cohort**
**Calendar of Professional Learning Opportunities**
**2012 – 2013**

### Description

The K-5 Science and Academic Literacy Cohort will support thirteen schools to significantly improve science instruction and literacy integration. Site Leadership Teams, LCI, and external partners will work together to accelerate science learning outcomes and deepen instructional practices aligned to the new K-12 Science Framework, Next Generation Science Standards, Common Core, and the FOSS Curriculum.

### Learning Outcomes

- Improve the quantity and quality of science instruction in all classrooms.
- Increase science teacher leadership capacity at each site.
- Develop science resources and model best practices for the District, with a focus on literacy integration and addressing issues of equity.

**Two week Summer Science Academy focused on science content, pedagogical practices, literacy strategies, and instructional planning. Science field experience will be provided.**

**Summer Academy: *"Science & Literacy: Developing a Content-Based Literacy Framework"***

- When: June 19 – 29, 2012, 8:30am – 3:30pm
- What: Integrating science inquiry and literacy through FOSS
- Who: Five teachers from each school (60 teachers total)

**One week Summer Science Leadership Institute dedicated to teacher leadership, structures for improving science instruction, and school-wide science implementation.**

**Leadership Institute**

- When: August 6 – 10, 2012, 8:30am – 3:30pm
- What: Leadership Development and SL Cohort Team Planning
- Who: Three teachers from each school (36 teachers total); plus principal last 2 days

**Regional Leadership Collaborations four times a year for principals and leadership team to share successes and resources:**

**Network Meeting Days**

- When: 10/25/2012, 11/29/2012, 2/7/2013, 5/16/2013; 3 hours each
- What: Network sharing of successes and challenges; instructional Rounds
- Who: Teacher Leadership Team (LST and 2 Teacher Leaders); Principal

**Buy-back Days dedicated to science professional development**

- When: October 12, 2012; February 1, 2013
- What: Symposium for 12 schools; differentiated sessions
- Who: all cohort teachers and administrators
- Where: cohort schools; TBD

## Appendix F—Science Literacy Cohort Overview

Science Department
**LEADERSHIP, CURRICULUM & INSTRUCTION**

OAKLAND UNIFIED SCHOOL DISTRICT

**Monthly staff meetings during the school year focused on science professional development and teacher collaboration**

- When: Once a month
- What: site-based PD and grade level professional learning community meetings (Team Building, Asset Mapping, Planning FOSS Instruction, Science Notebooks, Science ELA Integration, SWT, grade level determined)
- Where: On-site

**School-wide science events with support from Science Team**

- When: TBD by schools; possibly once per semester
- What: Family Engagement: Family Science Nights, Science Fairs, Expositions, etc.
- Where: On site

**Coaching**

**Weekly on-site coaching for teachers by Elementary Science Specialists**

- When: Once a week
- What: Teacher support through grade level meeting facilitation, modeling lessons, team teaching, observing, and feedback
- Who: Elementary Science Specialists
- Where: On site

| REGION 1 | | REGION 2 | | REGION 3 | |
|---|---|---|---|---|---|
| Hoover | *Laura P* | Franklin | *Liz W* | Burckhalter | *Duffy R* |
| Lafayette | *Laura P* | ICS | *Liz W* | EnCompass | *Duffy R* |
| Place@Prescott | *Laura P* | Laurel | *Liz W* | New Highland | *Duffy R* |
| MLK | *Sonnie D* | | | Parker/Howard | *Sonnie D* |
| Joaquin Miller | *Sonnie D* | | | | |

**Contact Person**
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## Appendix G—Science Focus School Overview

OUSD Science

### Science Focus Schools 2014 - 2015

**Focus School Teaching and Learning Goals**

The goal of the eight Science Focus Schools is to improve science instruction and converge with the Common Core State Standards for ELA/ELD. Teachers will use science as the context to engage students in academic discussions, writing with evidence, and reading complex text.

**Focus School Learning Outcomes**

- Improve the quantity and quality of science instruction in all classrooms
- Increase science leadership capacity at each site
- Develop science resources and model best practices for the District, with a focus on literacy integration and addressing issues of equity

**Focus School Teaching and Learning Expectations**

Teachers:

- Teachers use FOSS to teach science and meet as grade level to collaboratively plan their science instruction.
- Teachers teach all parts of all investigations of all three FOSS modules, each year. Instruction is focused on improving student overall learning and sense making, and use the 5-step lesson framework.
- Teachers create opportunities for students to engage in the NGSS Science and Engineering Practices and make connections between FOSS & NGSS.
- Teachers use science notebooks, academic discussions, and non-fiction text consistently with science instruction.
- Teachers assess students using the Science Instruction, Reflection, and Assessment tool (SIRA) and the Reflection and Assessment Protocol (RAP).

Leaders:

- Site leaders actively plan and support science professional learning time for their staff.
- Leaders engage in evidence-based discussions with teachers around improvement of science teaching and learning.

School Site:

- Resources are allocated to support professional learning around science, including grade-level PLCs, ILT time, and ongoing minimum day professional learning.
- The master schedule explicitly includes time at every grade level for science instruction beyond the minimum mandated minutes for hands-on science instruction.
- School engages in school-wide science events to promote family and community engagement in science, with support of the Grade-Level Facilitators and the Science Specialist.

## Appendix G—Science Focus School Overview

### Science Focus Schools Learning and Support Structures

| Learning Structure | Purpose/Topics | Audience | Dates |
|---|---|---|---|
| Summer Science Institute | Embedding NGSS Practices and Crosscutting Concepts in FOSS; Science as Gateway to CCSS ELA/ELD; Assessment Protocols; Science Leadership Development: Building Site Capacity | 60 Teachers from 8 school sites (6-8 Grade Level Facilitators from each School) | August 11 – 15, 2014 |
| Kick-off Celebration | Community building, setting expectations | All School members (Teachers & Administrators) | August 2014 4-6 pm |
| 2 Buy-Back Days (Mini-conference) | PK-5 science content, pedagogical learning, and CCSS ELA/ELD skills | All teachers and principals | October 2014 January 2015 |
| Monthly School Site Science PLC Meetings | Grade level planning, collaboration & reflection led by Grade Level Facilitators and Science Specialists | All Teachers | 60-75 min 1x month |
| School Site Science Professional Learning | PK-5 science pedagogical learning supported by LST, Grade-Level Facilitators, and Science Specialist | All Teachers | 75-90 min 4-6x/year |
| Leadership Collaboration Meetings | Opportunity for leaders to collaborate across Focus Schools | Lead Science Teachers, Science Grade-Level Facilitators & Principals | 3 (after-school) sessions |

### School Site Commitments

- The school commits to participating and implementing all learning structures listed above.
- Principal and all teachers are committed to improving their science program.
- All teachers teach the FOSS curriculum *beyond* the Board Policy weekly minutes.
- Science content is used as the context for accessing CCSS-ELA in writing, reading, and engaging in speaking and listening. Science content also provides the context for ELD.
- A Science Team of 5-6 Grade-Level Facilitators attend the 5-day Summer Institute and are given the time to report back and support the whole school around science instruction.
- Teachers are provided time to collaborate and plan science instruction monthly at grade-level, with the support of the Science Grade-Level Facilitators and Science Specialist.

OUSD Science

## New Elementary NGSS Implementation Timeline

**Science Vision Statement**: All Oakland students will graduate science literate with the skills that they need to succeed in college, career and community.

| | | Overview/Policy | Program Element (Inputs) | Teachers | Teacher Leaders (LSTs) | Site Administrators (Principals, AP, TSA) | District Leadership (T&L and Networks) | NGSS Leadership Team | Family & Community |
|---|---|---|---|---|---|---|---|---|---|
| 2015-16 | AWARENESS | Teacher leaders attend summer leadership training sessions and participate in lesson study process.<br><br>CLT continues to implement NGSS into classrooms and provides professional development activities to TL for implementation of NGSS<br><br>Teachers begin NGSS PD through the work of the teacher leaders.<br><br>Implementation of a new NGSS aligned curriculum (SIRA) in grades 3-4, based on district timeline<br><br>District assessment data and teacher collaborations inform the direction of continued implementation of a new NGSS aligned curriculum (SIRA) based on district timeline (i.e. expand to K-2).<br><br>Provide information to parents and community on shifts of NGSS | Professional Learning (Inputs) | • Participate in 1 full Wednesday site-based PL on NGSS implementation<br>• Attend centralized SIRA PD (grades 3-5)<br>• Teachers collaboratively score and analyze SIRA Assessments (grades 3-4) and use data to inform future instruction | • Attend August Summer NGSS Leadership Institute (physical science -elementary integrated -middle grades)<br>• Participate in 2 TLC lesson study cycles on NGSS<br>• Attend monthly LST meetings | • Attend a centralized PL on NGSS implementation, including SIRA, LST lesson study, and language development through Science | • Attend a centralized PL on NGSS implementation, including SIRA, LST lesson study, and language development through Science<br>• Analyze district SIRA assessment data (grades 3-4) and use data to plan for future PL and school support | • PL initiative with 5 x Dual Language schools focused on language demands of NGSS<br>• Facilitate lesson study, summer institutes, and monthly meetings for LSTs<br>• Facilitate a centralized PL on NGSS implementation, including SIRA, LST lesson study, and language development through Science<br>• Attend CSTA & NSTA conferences | • Families learn that NGSS is being used in schools; CST is not aligned to NGSS; as a result, CST scores do not reflect learning happening in schools<br>• OUSD has created the SIRA Assessment to monitor student learning (currently in 3-4, next year in 5th) |
| | | | Supporting Tools and Resources | • Continue to use FOSS with NGSS aligned pedagogy (academic discussion, claims & evidence, science notebooks)<br>• Implement SIRA (grades 3-4) and pilot in 5th<br>• Administer SIRA Assessment in grades 3-4<br>• Begin to use one FOSS kit in TK | • Hard copy of the NGSS Standards<br>• PL slideshow, materials, and notes for site-based PL<br>• PL materials (slideshow, handouts) for collaborative SIRA coding PL | • Provide teachers using SIRA assessments 1 hour of protected time for scoring and reflecting on SIRA assessments three times per year<br>• Provide LST with at least one full Wednesday PL session to facilitate NGSS PL with full staff | • Use Illuminate to collect and analyze SIRA assessment data (grades 3-4) | • Develop and pilot SIRA for 5th grade.<br>• Begin to develop a district specific NGSS instructional toolkit<br>• Begin to focus on new NGSS FOSS materials<br>• Begin to develop SIRA for grades K-2<br>• Provide one FOSS kit to TK | • CST Memo from Science Department<br>• SIRA Memo for Families<br>• Engineering Extravaganza Family Science Night kit |
| | | | Evidence & Outcomes | • Provide students with accessible science learning experiences (e.g. hands-on science, language supports, SEL support)<br>• Ensure all students have the opportunity to participate in Science Fair | • Provide resources for teachers and model equitable practices (e.g. language supports)<br>• Input PLs, events, etc. on a shared document<br>• Lead at least one site-based PL on NGSS<br>• Facilitate site-based PL on NGSS implementation<br>• Collaborate with ELA and math counterparts, ILT, and administration to revise and implement site goals, master schedule, and site PL<br>• Collect feedback from teachers piloting and implementing SIRA<br>• Plan and execute showcase of student learning for families and community (e.g. Science Fair, Engineering Extravaganza, Family Science Night) | • Ensure teachers provide science instruction in accordance with OUSD board policy (60 minutes/week in grades K-2, 90 minutes/week in grades 3-5)<br>• Facilitate participation of Lead Science Teacher in NGSS PL and lesson study activities | • Ensure all school master calendars include science instruction in accordance with OUSD board policy (60 minutes/week in grades K-2, 90 minutes/week in grades 3-5)<br>• Establish a district assessment calendar for SIRA (grades 3-4)<br>• Ensure principals schedules at least one introduction to NGSS PL | • Ensure community memos, event materials, etc. are presents in multiple languages<br>• Analyze district data (Spring Survey, SIRA) with an equity lens and plan support accordingly<br>• Equity advocates<br>• Combine district LST work with NGSS Early Implementation work (lesson study, materials management, ILT advocacy)<br>• Utilize professional networks within OUSD and beyond to build awareness of NGSS shifts and OUSD implementation strategies<br>• Present at CSTA in Sacramento<br>• Organize NGSS Symposium in Oakland<br>• Create tools for LSTs to share at sites to support analyzing and using SIRA data | • Attend a showcase of student learning for families and community (e.g. Science Fair, Engineering Extravaganza, Family Science Night) |

## Appendix I—OUSD Elementary NGSS Implementation Matrix

| | | Overview/Policy | Program Element matrix | Teachers | Teacher Leaders (LSTs) | Site Administrators (Principals, AP, TSA) | District Leadership (T&I and Network) | NGSS Leadership Team | Family & Community |
|---|---|---|---|---|---|---|---|---|---|
| 2016-17 | TRANSITION | Teacher leaders attend summer leadership training sessions and participate in lesson study process.<br><br>CLT continues to implement NGSS into classrooms and provides professional development activities to TL for implementation of NGSS.<br><br>Teachers continue NGSS PD through the work of the teacher leaders.<br><br>Implementation of a new NGSS aligned curriculum (SIRA) in grades 3-5.<br><br>CLT and TL begin to develop NGSS aligned curriculum (SIRA) for grades K-2. | Professional Learning (Inputs) | • All new teachers attend a centralized introduction to FOSS PL<br>• Participate in site-based cycle on science instruction<br>• Teachers collaboratively score and analyze SIRA Assessments (grades 3-5) and use data to inform future instruction | • Attend July Summer NGSS Leadership Institute (earth science - elementary integrated - middle grades)<br>• Participate in 2 TLC lesson study cycles on NGSS<br>• Attend monthly LST meetings<br>• Collaborate with ILT, administration, and NGSS CLT to plan and implement a minimum of one PL cycle on science instruction | • Conduct at least one instructional walk-through in Science a year<br>• Collaborate with LST, ILT, and NGSS CLT to plan and implement a minimum of one RBPD cycle on science instruction<br>• Participate in at least three centralized science PL | • Ensure site RBPD plans include a minimum of one PL cycle on science instruction<br>• Analyze district SIRA assessment data (grades 3-4) and use data to plan for future PL and school support | • PL initiative with six Dual Language schools focused on language demands of NGSS (Project OLAS)<br>• Facilitate lesson study, summer institutes, and monthly meetings for LSTs<br>• Facilitate a centralized PL on NGSS implementation, including SIRA, LST lesson study, and language development through Science<br>• Attend CSTA & NSTA conferences | • Families learn that NGSS is being used in schools; CST is not aligned to NGSS; as a result, CST scores do not reflect learning happening in schools<br>• OUSD has created the SIRA Assessment to monitor student learning in grades 3-5 |
| | | | Supporting Tools and Resources | • Continue to use FOSS with NGSS aligned pedagogy (academic discussion, claims & evidence, science notebooks)<br>• Implement SIRA (grades 3-5) and pilot new K-2 SIRA tools<br>• Administer SIRA Assessment in grades 3-5 | • Hard copy of the NGSS Standards<br>• PL slideshows, timelines, materials, and notes for site-based PL cycles | • Provide teachers using SIRA assessments 1 hour of protected time for scoring and reflecting on SIRA assessments three times per year.<br>• Provide LST with at least one full Wednesday PL session to facilitate NGSS PL with full staff | • Revise district report cards to include NGSS Science & Engineering Practices<br>• Use Illuminate to collect and analyze SIRA assessment data (grades 3-5) with a focus on equity (subgroup data) | • Finish developing a district specific NGSS instructional toolkit<br>• Begin to develop SIRA for grades K-2 | • Share information on NGSS Science & Engineering Practices through new report cards<br>• SIRA Memo for Families<br>• Engineering Extravaganza Family Science Night kit |
| | | | Evidence & Outcomes | • Provide students with accessible science learning experiences (e.g. hands-on science, language supports, SEL support)<br>• Ensure all students have the opportunity to participate in Science Fair | • **Provide resources for teachers and model equitable practices (e.g. language supports)**<br>• **Input PLs, events, etc. on a shared document**<br>• **Advocate for site-based PL time for NGSS**<br>• **Facilitate site-based PL on NGSS implementation**<br>• **Collaborate with ELA and math counterparts, ILT, and administration to revise and implement site goals, master schedule, and site PL**<br>• **Collect feedback from teachers piloting and implementing SIRA**<br>• **Plan and execute showcase of student learning for families and community (e.g. Science Fair, Engineering Extravaganza, Family Science Night)** | • Ensure teachers provide science instruction in accordance with OUSD board policy (60 minutes/week in grades K-2, 90 minutes/week in grades 3-5)<br>• Facilitate participation of Lead Science Teacher in NGSS PL and lesson study activities | • Ensure all school master calendars include science instruction in accordance with OUSD board policy (60 minutes/week in grades K-2, 90 minutes/week in grades 3-5)<br>• Ensure SIRA remains on the district assessment calendar (grades 3-5) | • Ensure community memos, event materials, etc. are presents in multiple languages<br>• Analyze district data (Spring Survey, SIRA) with an equity lens and plan support accordingly<br>• Combine district LST work with NGSS Early Implementation work (lesson study, materials management, ILT advocacy)<br>• Utilize professional networks within OUSD and beyond to build awareness of NGSS shifts and OUSD implementation strategies<br>• Create tools for LSTs to use to implement PL cycle | • Attend a showcase of student learning for families and community (e.g. Science Fair, Engineering Extravaganza, Family Science Night) |

## Appendix I—OUSD Elementary NGSS Implementation Matrix

| | | Overview/Policy | Program Element matrix | Teachers | Teacher Leaders (LSTs) | Site Administrators (Principals, AP, TSA) | District Leadership (T&L and Network) | NGSS Leadership Team | Family & Community |
|---|---|---|---|---|---|---|---|---|---|
| 2017-18 | IMPLEMENTATION | Teacher leaders attend summer leadership training sessions and participate in lesson study process.<br><br>CLT continues to implement NGSS into classrooms and provides professional development activities to TL for implementation of NGSS.<br><br>Teachers continue NGSS PD through the work of the teacher leaders.<br><br>Implementation of a new NGSS aligned curriculum (SIRA) in grades 3-5.<br><br>CLT and TL continue to develop NGSS aligned curriculum (SIRA) for grades K-2. | Professional Learning | • All new teachers attend a centralized introduction to FOSS PL<br>• Participate in site-based cycle on science instruction<br>• Teachers collaboratively score and analyze SIRA Assessments (grades 3-5) and use data to inform future instruction | • Attend Summer NGSS Leadership Institute (life science - elementary integrated - middle grades)<br>• Participate in 2 TLC lesson study cycles on NGSS<br>• Attend monthly LST meetings<br>• Collaborate with ILT, administration, and NGSS CLT to plan and implement a minimum of one PL cycle on science instruction | • Conduct at least one instructional walk through in Science<br>• Collaborate with LST, ILT, and NGSS CLT to plan and implement a minimum of one RBPD cycle on science instruction<br>• Participate in a minimum of six Principal PLs on science content and pedagogy, led by the science department | • Ensure site RBPD plans include a minimum of one PL cycle on science instruction<br>• Analyze district SIRA assessment data (grades 3-4) and use data to plan for future PL and school support | • PL initiative with six Dual Language schools focused on language demands of NGSS (Project OLAS)<br>• Facilitate lesson study, summer institutes, and monthly meetings for LSTs<br>• Facilitate a centralized PL on NGSS implementation, including SIRA, LST lesson study, and language development through science<br>• Attend CSTA & NSTA conferences | • Families learn that NGSS is being used in schools; CST is not aligned to NGSS; as a result, CST scores do not reflect learning happening in schools<br>• OUSD has created the SIRA Assessment to monitor student learning in grades 3-5 |
| | | | Supporting Tools and Resources | • Continue to use FOSS with NGSS aligned pedagogy (academic discussion, claims & evidence, science notebooks)<br>• Implement SIRA (grades 3-5) and pilot K-2 SIRA tools<br>• Administer SIRA Assessment in grades 3-5 | • Hard copy of the NGSS Standards<br>• PL slideshow, materials, and notes for site-based PL | • Provide teachers using SIRA assessments 1 hour of protected time for scoring and reflecting on SIRA assessments three times per year.<br>• Provide LST with at least one full Wednesday PL session to facilitate NGSS PL with full staff | • Continue to use Illuminate to collect and analyze SIRA assessment data (grades 3-5) with a focus on equity (subgroup data) | • Distribute and utilize a district specific NGSS instructional toolkit to all principals and teachers<br>• Begin to focus on new NGSS FOSS materials<br>• Continue to develop SIRA for grades K-2 | • Share information on NGSS Science & Engineering Practices through new report cards<br>• SIRA Memo for Families<br>• Engineering Extravaganza Family Science Night kit |
| | | | Evidence and Outcomes | • Provide students with accessible science learning experiences (e.g. hands-on science, language supports, SEL support)<br>• Ensure all students have the opportunity to participate in Science Fair | • Provide resources for teachers and model equitable practices (e.g. language supports)<br>• Input PLs, events, etc. on a shared document<br>• Advocate for site-based PL time for NGSS<br>• Facilitate site-based PL on NGSS implementation<br>• Collaborate with ELA and math counterparts, ILT, and administration to revise and implement site goals, master schedule, and site PL<br>• Collect feedback from teachers piloting and implementing K-2 SIRA<br>• Plan and execute showcase of student learning for families and community (e.g. Science Fair, Engineering Extravaganza, Family Science Night) | • Ensure teachers provide science instruction in accordance with OUSD board policy (60 minutes/week in grades K-2, 90 minutes/week in grades 3-5)<br>• Facilitate participation of Lead Science Teacher in NGSS PL and lesson study activities | • Ensure all school master calendars include science instruction in accordance with OUSD board policy (60 minutes/week in grades K-2, 90 minutes/week in grades 3-5)<br>• Ensure SIRA remains on the district assessment calendar (grades 3-5) | • Ensure community memos, event materials, etc. are presents in multiple languages<br>• Analyze district data (Spring Survey, SIRA) with an equity lens and plan support accordingly<br>• Combine district LST work with NGSS Early Implementation work (lesson study, materials management, ILT advocacy)<br>• Utilize professional networks within OUSD and beyond to build awareness of NGSS shifts and OUSD implementation strategies | • Attend a showcase of student learning for families and community (e.g. Science Fair, Engineering Extravaganza, Family Science Night) |

**Appendix J—NGSS Curriculum Review Session Flier**

OUSD Science

# K-5 NGSS Curriculum Review

Interested in the Next Generation Science Standards (NGSS)? Want to be involved in NGSS Curriculum Adoption for your district? Come to the NGSS Curriculum Review Session!

NEXT GENERATION SCIENCE STANDARDS

**Date:** Saturday, May 20, 2017
**Time:** 1:00-3:00 p.m.
**Location:** Laurel Elementary School, 3750 Brown Ave.

**Register through On-Track**

- Learn about the Next Generation Science Standards and curriculum adoption process from the OUSD Science Department
- Hear from representatives from leading NGSS curriculum publishers and review NGSS curriculum materials
- Evaluate curriculum options with a rubric and make recommendations to the district

# EQuIP Rubric for Lessons & Units: Science

**Version 3.0**

**Introduction**:

The Educators Evaluating the Quality of Instructional Products (EQuIP) Rubric for science provides criteria by which to measure the alignment and overall quality of lessons and units with respect to the Next Generation Science Standards (NGSS). The purposes of the rubric and review process are to: (1) review existing lessons and units to determine what revisions are needed; (2) provide constructive criterion-based feedback and suggestions for improvement to developers; (3) identify exemplars/models for teachers' use within and across states; and (4) to inform the development of new lessons and units.

To effectively apply this rubric, an understanding of the National Research Council's *A Framework for K–12 Science Education* and the *Next Generation Science Standards*, including the NGSS shifts (Appendix A of the NGSS), is needed. Unlike in the EQuIP Rubrics for mathematics and ELA, there is not a category in the science rubric for shifts. Over the course of the rubric development, writers and reviewers noted that the shifts fit naturally into the other three categories. For example, the blending of the three dimensions, or three-dimensional learning, is addressed in each of the three categories; coherence is addressed in the first two categories; connections to the Common Core State Standards is addressed in the first category; etc. Each category includes criteria by which to evaluate the integration of engineering, when included in a lesson or unit, through practices or disciplinary core ideas. Another difference between the EQuIP Rubrics from mathematics and ELA is in the name of the categories; the rubric for science refers to them simply as *categories*, whereas the math and ELA rubrics refer to the categories as dimensions. This distinction was made because the Next Generation Science Standards already uses the term *dimensions* to refer to practices, disciplinary core ideas, and crosscutting concepts.

The architecture of the NGSS is significantly different from other sets of standards. The three dimensions, crafted into performance expectations, describe what is to be assessed following instruction and therefore are the measure of proficiency. A lesson or unit may provide opportunities for students to demonstrate performance of practices connected with their understanding of core ideas and crosscutting concepts as foundational pieces. This three-dimensional learning leads toward eventual mastery of performance expectations. In this scenario, quality materials should clearly describe or show how the lesson or unit works coherently with previous and following lessons or units to help build toward eventual mastery of performance expectations. The term *element* is used in the rubric to represent the relevant, bulleted practices, disciplinary core ideas, and crosscutting concepts that are articulated in the foundation boxes of the standards and in K–12 grade-banded progressions and the NGSS Appendices. Given the understanding that lessons and units should integrate the practices, disciplinary core ideas, and crosscutting concepts in ways that make sense instructionally and not replicate the exact integration in the performance expectations, the new term *elements* is needed to describe these smaller units of the three dimensions. Although it is unlikely that a single lesson would provide adequate opportunities for a student to demonstrate proficiency on an entire performance expectation, high-quality units are more likely to provide these opportunities to demonstrate proficiency on one or more performances expectations.

There is a recognition among educators that curriculum and instruction will need to shift with the adoption of the NGSS, but it is currently difficult to find instructional materials designed for the NGSS. The power of the rubric is in the feedback and suggestions for improvement it provides curriculum developers and the productive conversations in which educators engage while evaluating materials using the quality review process. For curriculum developers, the rubric and review process provide evidence of the quality and the degree to which the lesson or unit is designed for the NGSS. Additionally, the rubric and review process generate suggestions for improvement on how materials can be further improved and better designed to match up with the vison of the *Framework* and the NGSS.

Version 3.0 — published September 2016

# EQuIP Rubric for Lessons & Units: Science

Lessons *and* units designed for the NGSS include clear and compelling evidence of the following:

| I. NGSS 3D Design | II. NGSS Instructional Supports | III. Monitoring NGSS Student Progress |
|---|---|---|
| *The lesson/unit is designed so students make sense of phenomena and/or design solutions to problems by engaging in student performances that integrate the three dimensions of the NGSS.* | *The lesson/unit supports three-dimensional teaching and learning for ALL students by placing the lesson in a sequence of learning for all three dimensions and providing support for teachers to engage all students.* | *The lesson/unit supports monitoring student progress in all three dimensions of the NGSS as students make sense of phenomena and/or design solutions to problems.* |
| A. **Explaining Phenomena/Designing Solutions**: Making sense of phenomena and/or designing solutions to a problem drive student learning.<br>i. Student questions and prior experiences related to the phenomenon or problem motivate sense-making and/or problem solving.<br>ii. The focus of the lesson is to support students in making sense of phenomena and/or designing solutions to problems.<br>iii. When engineering is a learning focus, it is integrated with developing disciplinary core ideas from physical, life, and/or earth and space sciences.<br><br>B. **Three Dimensions**: Builds understanding of multiple grade-appropriate elements of the science and engineering practices (SEPs), disciplinary core ideas (DCIs), and crosscutting concepts (CCCs) that are deliberately selected to aid student sense-making of phenomena and/or designing of solutions.<br>i. Provides opportunities to *develop and use* specific elements of the SEP(s).<br>ii. Provides opportunities to *develop and use* specific elements of the DCI(s).<br>iii. Provides opportunities to *develop and use* specific elements of the CCC(s).<br><br>C. **Integrating the Three Dimensions:** Student sense-making of phenomena and/or designing of solutions requires student performances that integrate elements of the SEPs, CCCs, and DCIs. | A. **Relevance and Authenticity**: Engages students in authentic and meaningful scenarios that reflect the practice of science and engineering as experienced in the real world.<br>i. Students experience phenomena or design problems as directly as possible (firsthand or through media representations).<br>ii. Includes suggestions for how to connect instruction to the students' home, neighborhood, community and/or culture as appropriate.<br>iii. Provides opportunities for students to connect their explanation of a phenomenon and/or their design solution to a problem to questions from their own experience.<br><br>B. **Student Ideas:** Provides opportunities for students to express, clarify, justify, interpret, and represent their ideas and to respond to peer and teacher feedback orally and/or in written form as appropriate.<br><br>C. **Building Progressions**: Identifies and builds on students' prior learning <u>in all three dimensions</u>, including providing the following support to teachers:<br>i. Explicitly identifying prior student learning expected for all three dimensions<br>ii. Clearly explaining how the prior learning will be built upon<br><br>D. **Scientific Accuracy**: Uses scientifically accurate and grade-appropriate scientific information, phenomena, and representations to support students' three-dimensional learning.<br><br>E. **Differentiated Instruction**: Provides guidance for teachers to support differentiated instruction by including:<br>i. Appropriate reading, writing, listening, and/or speaking alternatives (e.g., translations, picture support, graphic organizers, etc.) for students who are English language learners, have special needs, or read well below the grade level.<br>ii. Extra support (e.g., phenomena, representations, tasks) for students who are struggling to meet the targeted expectations.<br>iii. Extensions for students with high interest or who have already met the performance expectations to develop deeper understanding of the practices, disciplinary core ideas, and crosscutting concepts. | A. **Monitoring 3D student performances**: Elicits direct, observable evidence of three-dimensional learning; students are using practices with core ideas and crosscutting concepts to make sense of phenomena and/or to design solutions.<br><br>B. **Formative:** Embeds formative assessment processes throughout that evaluate student learning to inform instruction.<br><br>C. **Scoring guidance**: Includes aligned rubrics and scoring guidelines that provide guidance for interpreting student performance along the three dimensions to support teachers in (a) planning instruction and (b) providing ongoing feedback to students.<br><br>D. **Unbiased tasks/items**: Assesses student proficiency using methods, vocabulary, representations, and examples that are accessible and unbiased for all students. |

OUSD Science

**All OUSD students nurture curiosity and develop scientific understanding of our world in order to address personal, community, and global issues.**

MISSION

To ensure all students have high quality science experiences that are relevant, engaging, rigorous and literacy-rich, the OUSD Science Department will:

- Develop and distribute high quality instructional materials, curriculum, and assessments.
- Provide learning opportunities for teachers responsible for science instruction.
- Build the capacity of teacher leaders, principals, and district leaders.
- Collaborate with internal and external partners to strengthen future work and celebrate accomplishments, and align district priorities.

## Appendix M—OUSD NGSS Curriculum Criteria

### K-8 NGSS Curriculum Review Feedback Form

Thank you for participating in the OUSD K-8 NGSS Curriculum Review process. Your feedback will inform the process for curriculum pilot and selection in the 2017-2018 school year, with the goal of district-wide implementation in the 2018-2019 school year. If you were unable to gain information about individual items, please leave the item **blank**.

| Name | School |
|---|---|
| Years Taught | Current Grade/Assignment |

| **Participant Information** | 1 Not at all | 2 Not very | 3 Neutral | 4 Some-what | 5 Very Much |
|---|---|---|---|---|---|
| How familiar are you with NGSS? | | | | | |
| How comfortable are you teaching hands-on science? | | | | | |
| How familiar are you with Common Core ELA Standards? | | | | | |
| How familiar are you with Common Core Math Standards? | | | | | |
| How familiar are you with CA-ELD Standards? | | | | | |

**Instructions**

You will hear presentations or review curricular materials from three different curriculum providers. These curricula were selected based on feedback from the nine different district and charter organization in the NGSS Early Implementation Initiative with the K-12 Alliance. In the 2015-2016 school year, classroom teachers serving on the Core Leadership Teams of the nine districts piloted full units from eight different NGSS curricula. These are the three top rated programs.

The following documents are for you to take notes. At the end of this review session, you will use them as you complete the **ONLINE FEEDBACK FORM**. We ask that you evaluate the **evidence** presented using your **expertise** as an educator.

**tinyurl.com/OUSDNGSSK-8**

If you were unable to gain information about individual items in the time allotted, you may leave individual items **blank**.

## Appendix M—OUSD NGSS Curriculum Criteria

Schedule

| Time | Agenda | Location |
|---|---|---|
| 1:00-1:15 | **Process Overview** | Gym |
| 1:15-1:45 | **Session 1**<br>❖ Amplify (6-8)<br>❖ FOSS (K-2)<br>❖ STEMscopes (3-5) | Portables |
| 1:15-1:45 | **Session 2**<br>❖ Amplify (3-5)<br>❖ FOSS (6-8)<br>❖ STEMscopes (K-2) | Portables |
| 1:15-1:45 | **Session 3**<br>❖ Amplify (K-2)<br>❖ FOSS (3-5)<br>❖ STEMscopes (6-8) | Portables |
| 2:45-3:00 | **Feedback Collection** | Gym |

## Appendix M—OUSD NGSS Curriculum Criteria

Curriculum: _____

| NGSS Alignment | 1 Not at all | 2 Not very | 3 Neutral | 4 Some what | 5 Very Much |
|---|---|---|---|---|---|
| Does the curriculum provide experiences with phenomena that support deep conceptual learning? | | | | | |
| Does the curriculum have students discussing open-ended questions that focus on the strength of the evidence used to generate claims? | | | | | |
| Are Science & Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts woven together so that student tasks reflect the ways that real scientists do and think about science? | | | | | |
| Is there a clear Scope and Sequence or Concept Map that shows NGSS learning progressions? | | | | | |

| Language, Literacy, and Common Core Connections | 1 Not at all | 2 Not very | 3 Neutral | 4 Some what | 5 Very Much |
|---|---|---|---|---|---|
| Does the curriculum include embedded supports for **language development**? | | | | | |
| Are there frequent opportunities to **write** in Science Notebooks for a variety of purposes, such as collecting data, developing, using, and revising models, constructing explanations based on evidence, and reflecting on their learning? | | | | | |
| Does the curriculum include frequent opportunities for students to engage in discussion and **argumentation** to make sense of data and deepen their understanding? | | | | | |
| Will students **read** complex text ***after*** their investigations to deepen their understanding? | | | | | |
| Does the curriculum provide supports for **mathematical thinking** & data analysis? | | | | | |

| Equity | 1 Not at all | 2 Not very | 3 Neutral | 4 Some what | 5 Very Much |
|---|---|---|---|---|---|
| Do the learning experiences hook into students' prior knowledge? | | | | | |
| Do the learning experiences seem relevant to the lives of the students you teach? | | | | | |
| Do the print materials reflect the diversity of our school communities? | | | | | |
| Are student materials available in languages other than English? | | | | | |

## Appendix M—OUSD NGSS Curriculum Criteria

| Student Materials | 1 Not at all | 2 Not very | 3 Neutral | 4 Some-what | 5 Very Much |
|---|---|---|---|---|---|
| Will all students be able to access the materials? | | | | | |
| Does the curriculum include traditional tools of science (e.g. hand lenses and measuring devices) and common objects so that students can see opportunities for science in their everyday lives? | | | | | |
| Do the reading materials allow students to build on ideas from their hands-on experiences? | | | | | |

| Assessment | 1 Not at all | 2 Not very | 3 Neutral | 4 Some-what | 5 Very Much |
|---|---|---|---|---|---|
| Do the assessments (formative and summative) provide information about both conceptual understanding and skills (e.g. Science and Engineering Practices)? | | | | | |
| Does the curriculum provide guidance for how to use the assessment data? | | | | | |
| Are the summative assessments easily administered (e.g. within one session)? | | | | | |

| Usability | 1 Not at all | 2 Not very | 3 Neutral | 4 Some-what | 5 Very Much |
|---|---|---|---|---|---|
| Are the teacher materials user-friendly? | | | | | |
| Do you think you could use the teacher materials without having had any training? | | | | | |
| Are the teacher materials available in languages other than English? | | | | | |

| Overall | Do not recommend | Recommend with reservations | Recommend |
|---|---|---|---|
| Would you recommend this curriculum for adoption? | | | |
| **Comments:** | | | |

Thank you for participating in the OUSD K-8 NGSS Curriculum Review process. For questions about this process or science in OUSD, contact Elementary Science Coordinator Brenda.Tuohy@ousd.org or Secondary Science Coordinator Herberta.Zulueta@ousd.org.

| Timestamp | School | Years taught | Current Grade/Assignment | Participant Information [How familiar are you with the NGSS?] | Participant Information [How comfortable are you teaching hands-on science?] | Participant Information [How familiar are you with Common Core ELA Standards?] | Participant Information [How familiar are you with Common Core Math Standards?] | Participant Information [How familiar are you with CA-ELD Standards?] |
|---|---|---|---|---|---|---|---|---|
| 5/20/2017 15:01:29 | Bella Vista | 11 or more | 2 | Somewhat | Very much | Somewhat | Somewhat | Somewhat |
| 5/20/2017 15:10:37 | Bella Vista | 11 or more | 2 | Very much | Somewhat | Very much | Neutral | Neutral |
| 5/20/2017 15:14:44 | Markham Elementary | 11 or more | 3 | Very much | Very much | Very much | Somewhat | Somewhat |
| 5/20/2017 15:15:28 | Laurel | 3-5 | 3 | Somewhat | Very much | Somewhat | Somewhat | Somewhat |
| 5/20/2017 15:10:01 | Melrose Leadership Acade | 11 or more | 4 | Very much | Very much | Very much | Very much | Very much |
| 5/20/2017 15:06:54 | Thornhill | 11 or more | 5 | Very much | Very much | Somewhat | Somewhat | Neutral |
| 5/20/2017 15:10:34 | Montclair | 11 or more | 5 | Very much | Very much | Very much | Very much | Somewhat |
| 5/20/2017 15:20:39 | Franklin | 11 or more | 5 | Very much | Very much | Very much | Very much | Very much |
| 5/20/2017 15:12:01 | Montclair | 3-5 | 1-2 | Very much | Very much | Very much | Very much | Very much |
| 5/20/2017 14:47:11 | Global Family School | 11 or more | 1st | Very much | Very much | Very much | Very much | Somewhat |
| 5/20/2017 15:12:25 | Bridges Academy @Melros | 11 or more | 1st grade bilingual | Somewhat | Very much | Very much | Very much | Somewhat |
| 5/20/2017 15:16:06 | PLACE@Prescott | 0-2 | 2/3 | Somewhat | Very much | Very much | Very much | Very much |
| 5/20/2017 15:23:41 | laurel | 11 or more | 2nd | Somewhat | Very much | Somewhat | Very much | Very much |
| 5/20/2017 15:11:55 | Franklin | 6-10 | 3rd | Very much | Very much | Very much | Very much | Somewhat |
| 5/20/2017 15:17:47 | bridges academy | 11 or more | 3rd | Very much | Very much | Somewhat | Somewhat | Somewhat |
| 5/20/2017 15:23:33 | EnCompass Academy | 11 or more | 3rd | Somewhat | Very much | Very much | Very much | Somewhat |
| 5/20/2017 15:14:00 | Redwood Heights | 11 or more | 3rd Grade | Somewhat | Very much | Somewhat | Somewhat | Somewhat |
| 5/20/2017 15:18:55 | Global Family | 11 or more | 4/5 combo class | Somewhat | Very much | Very much | Very much | Neutral |
| 5/20/2017 15:19:22 | Cleveland Elementary | 11 or more | 4th | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat |
| 5/20/2017 15:20:01 | Bella Vista Elementary | 11 or more | 4th | Very much | Very much | Very much | Very much | Very much |
| 5/20/2017 15:14:55 | Grass Valley | 11 or more | 4th and 5th specia | Very much | Very much | Somewhat | Very much | Not very |
| 5/20/2017 15:25:54 | Montclair Elementary Scho | 11 or more | 5th | Very much | Very much | Very much | Very much | Neutral |
| 5/20/2017 15:18:13 | Crocker Highlands | 6-10 | 5th | Very much | Very much | Somewhat | Very much | Neutral |
| 5/17/2017 11:14:59 | Allendale | 6-10 | Elementary Scienc | Very much | Very much | Somewhat | Somewhat | Somewhat |
| 5/20/2017 15:09:22 | Allendale | 3-5 | elementary scienc | Very much | Very much | Somewhat | Somewhat | Neutral |
| 5/20/2017 15:14:31 | Sankofa Academy | 11 or more | k | Somewhat | Very much | Very much | Somewhat | Somewhat |
| 5/17/2017 11:01:34 | Science | 11 or more | K-5 | Very much | Very much | Very much | Somewhat | Somewhat |
| 5/20/2017 15:07:22 | Madison Park Academy Lo | 3-5 | K-5 | Very much | Very much | Very much | Somewhat | Very much |
| 5/20/2017 15:10:09 | Think College Now | 3-5 | k-5 | Very much | Very much | Very much | Somewhat | Very much |
| 5/20/2017 15:18:57 | Chabot | 6-10 | K-5 | Very much | Very much | Somewhat | Somewhat | Somewhat |
| 5/20/2017 15:25:09 | Howard Elementary | 6-10 | k-5 | Very much | Very much | Very much | Somewhat | Somewhat |
| 5/20/2017 15:17:23 | RISE | 11 or more | K-5 Science Prep | Very much | Very much | Somewhat | Somewhat | Somewhat |
| 5/20/2017 15:11:58 | Garfield | 3-5 | K-5/Science Reso | Very much | Very much | Very much | Very much | Somewhat |
| 5/20/2017 15:07:53 | Joaquin Miller | 11 or more | Kindergarten | Very much | Very much | Somewhat | Very much | Somewhat |
| 5/20/2017 15:08:45 | Futures Elementary | 6-10 | Kindergarten | Very much | Very much | Very much | Very much | Not very |
| 5/20/2017 15:15:52 | Sequoia | 11 or more | Kindergarten | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat |
| 5/20/2017 15:12:26 | REACH | 6-10 | TK-5 Science | Very much | Very much | Somewhat | Somewhat | Somewhat |
| 5/20/2017 15:31:41 | Markham Elementary | 3-5 | TK-5th Grade | Very much | Very much | Very much | Very much | Very much |
| 5/20/2017 15:06:54 | Allendale | 11 or more | TK-5th Science Pr | Somewhat | Very much | Somewhat | Somewhat | Somewhat |

| Which curriculum are you evaluating? | NGSS Alignment [Does Amplify provide experiences with phenomena that support deep conceptual learning?] | NGSS Alignment [Does Amplify have students discussing open-ended questions that focus on the strength of the evidence used to generate claims?] | NGSS Alignment [Are Science & Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts woven together so that student tasks reflect the ways that real scientists do and think about science?] | NGSS Alignment [Is there a clear Scope and Sequence or Concept Map that shows NGSS learning progressions?] | Language, Literacy, and Common Core Connections [Does Amplify include embedded supports for language development?] | Language, Literacy, and Common Core Connections [Are there frequent opportunities to write in Science Notebooks for a variety of purposes, such as collecting data, developing, using, and revising models, constructing explanations based on evidence, and reflecting on their learning?] | Common Core Connections [Does Amplify include frequent opportunities for students to engage in discussion and argumentation to make sense of data and deepen their understanding?] |
|---|---|---|---|---|---|---|---|
| Amplify | Somewhat | Somewhat | Very much | Very much | Somewhat | Not at all | Somewhat |
| Amplify | Very much | Somewhat | Very much | Neutral | Very much | Very much | Very much |
| Amplify | Somewhat | Neutral | Very much | Neutral | Somewhat | Neutral | |
| Amplify | Very much | Very much | Very much | Very much | | Somewhat | Very much |
| Amplify | Very much | Very much | Very much | Somewhat | Somewhat | Not very | Neutral |
| Amplify | Very much | Somewhat | Very much | Somewhat | Somewhat | Somewhat | Very much |
| Amplify | Neutral | Neutral | Somewhat | Neutral | Neutral | Neutral | Neutral |
| Amplify | Somewhat | | Somewhat | | Very much | Somewhat | Somewhat |
| Amplify | Somewhat | Very much | Neutral | Not very | Not at all | Somewhat | Very much |
| Amplify | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| Amplify | Very much | Very much | Somewhat | Somewhat | Somewhat | Very much | Very much |
| Amplify | Somewhat | Neutral | Somewhat | Somewhat | Very much | Somewhat | Neutral |
| Amplify | Very much | Neutral | Very much | Very much | Very much | Neutral | Neutral |
| Amplify | Very much | | Very much | | Very much | Neutral | Somewhat |
| Amplify | Somewhat | Somewhat | Somewhat | Neutral | Neutral | Neutral | Somewhat |
| Amplify | Very much | Very much | Very much | Neutral | Somewhat | Somewhat | Very much |
| Amplify | Very much | Very much | Very much | Somewhat | | Somewhat | Very much |
| Amplify | Somewhat | Somewhat | Very much | Somewhat | Very much | Neutral | Not very |
| Amplify | Very much | Very much | Somewhat | Very much | Somewhat | Very much | Very much |
| Amplify | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral |
| Amplify | | | | | | | |
| Amplify | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| Amplify | Somewhat | Somewhat | Somewhat | Very much | Somewhat | Somewhat | Not very |
| Amplify | Very much | Very much | Very much | | Very much | Very much | Very much |
| Amplify | Very much | Very much | Very much | Somewhat | Neutral | Somewhat | Very much |
| Amplify | Very much | Very much | Very much | Very much | | Neutral | |
| Amplify | Somewhat | Somewhat | Very much | Very much | Somewhat | Very much | Somewhat |
| Amplify | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral |
| Amplify | | | Very much | | | | |
| Amplify | Very much | Very much | Very much | Very much | Neutral | Somewhat | Very much |
| Amplify | | | | | | | |
| Amplify | | | | | | | |
| Amplify | Very much | Very much | Very much | Very much | Very much | Neutral | Somewhat |
| Amplify | Very much | Very much | Very much | Very much | Neutral | Very much | Very much |
| Amplify | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| Amplify | | | | | | | |
| Amplify | | | | | | | |
| Amplify | | | | | | | |
| Amplify | | | | | | | |

| Language, Literacy, and Common Core Connections [Will students read complex text after their investigations to deepen their understanding?] | Language, Literacy, and Common Core Connections [Does Amplify provide supports for mathematical thinking & data analysis?] | Equity [Do the learning experiences hook into students' prior knowledge?] | Equity [Do the learning experiences seem relevant to the lives of the students you teach?] | Equity [Do the print materials reflect the diversity of our school communities] | Equity [Are student materials available in languages other than English?] | Student Materials [Will all students be able to access the materials?] | Student Materials [Does Amplify include traditional tools of science (e.g. hand lenses and measuring devices) and common objects so that students can see opportunities for science in their everyday lives?] |
|---|---|---|---|---|---|---|---|
| Not very | Not at all | Somewhat | Somewhat | Not at all | Neutral | Somewhat | Not very |
| Very much | Very much | Neutral | Somewhat | Somewhat | Neutral | Somewhat | Very much |
| Neutral | | | | | Somewhat | | |
| Very much | | Very much | Somewhat | | Not very | Very much | |
| Very much | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Very much |
| Very much | Neutral | Very much | Very much | Neutral | Somewhat | Not very | |
| Very much | Somewhat | Somewhat | Somewhat | Neutral | Very much | Neutral | Neutral |
| Somewhat | Somewhat | Somewhat | | | Very much | Very much | Somewhat |
| Neutral | Not very | Somewhat | Neutral | Very much | Not very | Somewhat | Somewhat |
| Very much | Very much | Somewhat | Very much | Neutral | Very much | Very much | Very much |
| Very much | Very much | Very much | Very much | Somewhat | Somewhat | Somewhat | Somewhat |
| Not very | Not at all | Not very | Neutral | Very much | Somewhat | Neutral | Somewhat |
| Very much | Neutral | Very much | Very much | Neutral | Neutral | Very much | Neutral |
| Very much | Somewhat | Somewhat | Very much | | Somewhat | | |
| Somewhat | Neutral | Somewhat | Not very | Neutral | Somewhat | Neutral | Very much |
| Somewhat | | Somewhat | Very much | | Somewhat | Somewhat | |
| Very much | Somewhat | Somewhat | Somewhat | | | Somewhat | Very much |
| Neutral | Not very | Neutral | Very much | Somewhat | Somewhat | Somewhat | Somewhat |
| Very much | Neutral | Very much | Very much | Very much | Very much | Somewhat | Very much |
| Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral |
| | | | | | | | |
| Very much | | | Very much | | Somewhat | Somewhat | Neutral |
| Somewhat | Neutral | Somewhat | Somewhat | Not very | Neutral | Somewhat | Somewhat |
| Very much | Very much | Very much | Very much | Very much | Somewhat | | Very much |
| Somewhat | Somewhat | Somewhat | | | Somewhat | Somewhat | |
| Somewhat | Somewhat | | | | | Very much | Very much |
| Very much | Somewhat | Very much | Very much | Very much | Very much | Somewhat | Very much |
| Neutral | Neutral | Neutral | Not very | Somewhat | Not at all | Neutral | Neutral |
| Very much | | Somewhat | | | | | |
| Somewhat | Somewhat | Somewhat | Very much | Neutral | Somewhat | Very much | Very much |
| | | | | | | | |
| Very much | Neutral | Neutral | Somewhat | Not very | Not at all | Very much | Very much |
| Somewhat | Neutral | Neutral | Very much | Very much | Very much | Very much | Very much |
| Very much | Very much | Very much | Very much | Very much | Somewhat | Very much | Very much |

| Student Materials [Do the reading materials allow students to build on ideas from their hands-on experiences?] | Assessment [Do the assessments (formative and summative) provide information about both conceptual understanding and skills (e.g. Science and Engineering Practices)?] | Assessment [Does Amplify provide guidance for how to use the assessment data?] | Assessment [Are the summative assessments easily administered (e.g. within one session) ?] | Usability [Are the teacher materials user-friendly?] | Usability [Do you think you could use the teacher materials without having had any training?] | Usability [Are the teacher materials available in languages other than English?] |
|---|---|---|---|---|---|---|
| Neutral | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Neutral |
| Very much | Somewhat | Somewhat | Somewhat | Very much | Very much | Neutral |
| Neutral | | | | Neutral | Not very | |
| Somewhat | Very much | Neutral | Very much | Very much | Very much | Neutral |
| Very much | Very much | Very much | Very much | Somewhat | Somewhat | Not very |
| Very much | Neutral | | Very much | Not very | Not very | Neutral |
| Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral |
| Somewhat | Somewhat | | Somewhat | | | Somewhat |
| Somewhat | Somewhat | Somewhat | Somewhat | Not very | Somewhat | Somewhat |
| Very much | Very much | Very much | Very much | Very much | Very much | Neutral |
| Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat |
| Somewhat | Somewhat | Somewhat | Somewhat | Not very | Not very | Neutral |
| Very much | Very much | Very much | Neutral | Very much | | Not very |
| Very much | | | | Somewhat | Neutral | |
| Neutral | Neutral | Somewhat | Neutral | Neutral | Not very | Somewhat |
| Very much | Very much | | Very much | Somewhat | Somewhat | |
| Very much | Somewhat | | | Somewhat | Somewhat | |
| Very much | Neutral | Somewhat | Neutral | Neutral | Neutral | Somewhat |
| Very much | Neutral | Neutral | Neutral | Very much | Very much | Very much |
| Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral |
| | | | | | | |
| Very much | Very much | | | Somewhat | Somewhat | |
| Very much | Somewhat | Somewhat | Somewhat | Not very | Not at all | Neutral |
| Very much | Very much | | | Somewhat | | Somewhat |
| Somewhat | Somewhat | | | Somewhat | Somewhat | |
| Very much | Neutral | Neutral | Neutral | Somewhat | Somewhat | |
| Very much | Neutral | Neutral | Neutral | Very much | Somewhat | Neutral |
| Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral |
| | Very much | | | | | |
| Very much | Neutral | Neutral | Neutral | Somewhat | Somewhat | Somewhat |
| | | | | | | |
| Very much | Somewhat | Not very | Neutral | Neutral | Not very | Very much |
| Somewhat | Somewhat | Neutral | Somewhat | Very much | Very much | Neutral |
| Very much | Very much | Very much | Very much | Very much | Very much | Somewhat |

| Overall | Comments: |
|---|---|
| I recommend Amplify for adoption. | none |
| I recommend Amplify for adoption. | I looked that the materials for a lesson were in a bag. All teacher materials included focus questions and vocabulary cards. Easy to teach, rather than make it all. Nice lesson progression. Everything is broken into manageable bits! |
| I do not recommend Amplify for adoption. | TE only available online, tab system is not very user friendly, difficult to judge student materials without seeing a copy for my grade level; summative assessments seemed cumbersome |
| I recommend Amplify with reservations. | I loved the big books that they had for the younger grades, and found the layered approach to each unit to be compelling. Looking closer at the online resources, I am slightly concerned by the apps in the higher grades ("Simulations") since our school does not have access to tablets. |
| I recommend Amplify with reservations. | |
| I do not recommend Amplify for adoption. | |
| I recommend Amplify with reservations. | |
| I recommend Amplify with reservations. | The program seems interesting, but I was curious about the differences between Amplify and FOSS as they both are coming out of the Lawrence Hall of Science. The student books looked good. It was hard to get a sense of the hands-on investigations because the speakers didn't talk much about them. |
| I do not recommend Amplify for adoption. | |
| I recommend Amplify for adoption. | like it, very similar to FOSS. Books are paper back that run the risk of not holding up for many years. Was able to see hands on activity, which was good. In terms of hands on materials we currently have, how much of it can we use with the new adoption materials? |
| I recommend Amplify with reservations. | |
| I do not recommend Amplify for adoption. | I like the real world applications for each investigation, but think that they are not open-ended enough. The student workbooks have everything pre-printed, which leaves little room for student initiated investigations. I don't like the online TE, I need a hard copy! |
| I recommend Amplify with reservations. | I like that you can have the most updated version, starts with real world problems, designed specifically for NGSS, liked the "on the fly and self assessment components |
| I recommend Amplify with reservations. | I like the project/problem-based format, seems engaging and probably well-thought out. I don't like the workbook-style "science notebook". Seems more like a publisher's workbook than a scientist's sense-making tool. |
| I do not recommend Amplify for adoption. | The sample lessons about puppet shows and pinball machines seemed overly complicated and not very engaging. Teacher manuals that can only be read online (unless you want to print them out yourself) are a huge drawback to district-wide implementation. Preprinted notebooks are not useful - our student-made notebooks are much more dynamic and encourage students to refer back to their own thinking. I would never give that up for a book of worksheets. 30 minutes is not enough to get a total picture of the program, and I will go online and read through Amplify, but for now I can't recommend it. |
| I do not recommend Amplify for adoption. | I love their focus on phenomena. collect evidence, build solutions and extend. I am concerned about the newness. |
| I recommend Amplify for adoption. | The presentation of the performance expectations seemed really engaging and connects to real world issues. |
| I recommend Amplify with reservations. | I think Amplify is interesting, NGSS aligned, and would be very engaging to our students. I feel like I still have questions about some aspects of it, and it might need to be adapted more than FOSS to fit with our vision. |
| I recommend Amplify with reservations. | The units coherence across grade levels, the concept development from grade to grade was not explicit. Great presentation. I would use this material as an auxiliary material. |
| I do not recommend Amplify for adoption. | |
| I recommend Amplify with reservations. | |
| I do not recommend Amplify for adoption. | The teachers at my school are not going to go online to access or print materials. We are not at that point with technology at our school. |

| | |
|---|---|
| I recommend Amplify for adoption. | This is my favorite of the three curricula. Even though I don't like that there's not a hard copy of the teacher's guide, I love that it was designed for NGSS, each investigation centering around a problem or a project, and coming from the perspective of student as scientist or engineer. The student books are beautiful! The notebooks seem like they're good but the example they showed us didn't have many visuals. There were, however, some great visuals like vocab cards, etc. I think that Amplify might be more engaging than FOSS, getting students invested in a long-term project or problem-solving investigation versus having investigations that are interesting but not based on trying to figure out something that you want to apply in the end (or along the way). Love this one! |
| I recommend Amplify for adoption. | |
| I recommend Amplify with reservations. | |
| I do not recommend Amplify for adoption. | Pros: Student readers, phenomena first via real world problem, chapters provide opportunities to deepen learning, layered teacher materials. |
| I do not recommend Amplify for adoption. | Cons: pre-printed workbook in lieu of science notebook.<br>I dont know Amplify well enough to make a recommendation. I liked the assessment piece especially the on the fly assessment (what to look for during investigations. |
| I recommend Amplify with reservations. | I love the project-based approach. However, a ready-made hard copy of the teacher's guide is a must for many teachers. I also think that student-created science notebooks are more meaningful than workbooks for science learning. |
| I recommend Amplify with reservations. | liked the making sense wall, TM online only, copying manuals could be an issue at some sites |
| I recommend Amplify for adoption. | It is friendly both to students and teachers. Teachers can use teacher materials without having had much training so that new teachers can feel confident to teach science in their classrooms. |

| Which curriculum are you evaluating? | NGSS Alignment [Does the curriculum provide experiences with phenomena that | NGSS Alignment [Does the curriculum have students discussing open-ended questions that focus on the strength of | NGSS Alignment [Are Science & Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts woven together so | NGSS Alignment [Is there a clear Scope and Sequence or Concept Map that shows NGSS | Language, Literacy, and Common Core Connections [Does the curriculum include embedded supports for | Language, Literacy, and Common Core Connections [Are there frequent opportunities to write in Science Notebooks for a variety of purposes, such as collecting data, | Language, Literacy, and Common Core Connections [Does the curriculum include frequent opportunities for students to engage in |
|---|---|---|---|---|---|---|---|
| NextGen FOSS | | | | | | | |
| NextGen FOSS | Somewhat | Neutral | Somewhat | Somewhat | Somewhat | Somewhat | Neutral |
| NextGen FOSS | Somewhat | Somewhat | Very much | Very much | Somewhat | Neutral | Somewhat |
| NextGen FOSS | Very much | Very much | Very much | Very much | Somewhat | Very much | Somewhat |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Somewhat | Somewhat | Very much | Somewhat | Somewhat | Very much | Very much |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Very much | Neutral | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Somewhat | Very much | Very much | Very much | Somewhat | Very much | Very much |
| NextGen FOSS | Very much | Somewhat | Very much | Somewhat | | Very much | |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Neutral | Somewhat | Somewhat | Somewhat | Somewhat | Very much | Somewhat |
| NextGen FOSS | Very much | Very much | Somewhat | Very much | Neutral | Very much | Very much |
| NextGen FOSS | Very much | Very much | | | Very much | Very much | |
| NextGen FOSS | Very much | Neutral | Very much | Somewhat | Somewhat | Very much | Somewhat |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Somewhat | Very much | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Somewhat | Somewhat | Neutral | Very much | Somewhat | Somewhat | Somewhat |
| NextGen FOSS | | | | | | | |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Somewhat | Very much | Very much | Very much | Somewhat | Very much | |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Somewhat |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Neutral | Somewhat | Very much | Neutral | Neutral | Very much | Neutral |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Very much | Very much | Very much | Very much | Somewhat | Very much | Very much |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Very much | Very much | Very much | Very much | Somewhat | Very much | Somewhat |
| NextGen FOSS | Very much | Very much | Very much | Very much | Somewhat | Very much | Very much |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Very much | | Very much | Very much | Somewhat | Very much | Very much |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| NextGen FOSS | Very much | Very much | Very much | Very much | Very much | Very much | Very much |

| Language, Literacy, and Common Core Connections [Will students read complex text after their | Language, Literacy, and Common Core Connections [Does the curriculum provide supports for | Equity [Do the learning experiences hook into students' prior | Equity [Do the learning experiences seem relevant to the lives of | Equity [Do the print materials reflect the diversity of our school | Equity [Are student materials available in languages | Student Materials [Will all students be able to access the materials?] | Student Materials [Does the curriculum include traditional tools of science (e.g. hand lenses and measuring devices) and common | Student Materials [Do the reading materials allow students to build on ideas from their hands-on | Assessment [Do the assessments (formative and summative) provide information about both conceptual understanding |
|---|---|---|---|---|---|---|---|---|---|
| Somewhat | Neutral | Somewhat | Somewhat | Not very | Very much | Neutral | Neutral | Neutral | Neutral |
| Very much | Somewhat | Somewhat | Somewhat | Neutral | Very much | Very much | Very much | Very much | Somewhat |
| Very much | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Very much | Very much | Somewhat |
| Very much | Very much | Very much | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| Very much | Very much | Very much | Very much | Very much | | Very much | Very much | Very much | Very much |
| Very much | Somewhat | Very much | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| Very much | Very much | Very much | Very much | Very much | Somewhat | Very much | Neutral | Very much | Very much |
| Very much | Somewhat | Very much | Very much | Somewhat | Somewhat | Very much | Very much | Very much | Very much |
| Very much | Very much | Very much | Somewhat | Somewhat | Very much | Very much | Very much | Very much | Very much |
| Somewhat | Very much | | Somewhat | | Very much | | Very much | Very much | Very much |
| Very much | Very much | Very much | Very much | Very much | Very much | Very much | Very much | Very much | |
| Not very | Not very | Neutral | Neutral | Not very | Not very | Somewhat | Very much | Somewhat | Somewhat |
| Very much | Somewhat | Somewhat | Somewhat | Very much | Neutral | Very much | Very much | Very much | Somewhat |
| Very much | | | | | Somewhat | | | | |
| Very much | Somewhat | | | | Very much | Very much | Very much | Very much | Somewhat |
| Very much | Very much | Neutral | Somewhat | Somewhat | Somewhat | Very much | Very much | Very much | Very much |
| Very much | Very much | Very much | Very much | Neutral | Very much | Very much | Very much | Neutral | Very much |
| Somewhat | Somewhat | Neutral | Somewhat | Neutral | Neutral | Somewhat | Somewhat | Somewhat | Somewhat |
| Very much | Very much | Neutral | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| Very much | Somewhat | | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| Very much | Very much | Somewhat | | | Somewhat | Very much | Very much | Very much | |
| Very much | Somewhat | Very much | Very much | Somewhat | Somewhat | Somewhat | Very much | Very much | Very much |
| Very much | Very much | Very much | Very much | Very much | Somewhat | Very much | Very much | Very much | Very much |
| Very much | Neutral | Somewhat | Somewhat | Neutral | Not at all | Neutral | Very much | Neutral | Neutral |
| Very much | Very much | Very much | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| Somewhat | Somewhat | Very much | Very much | Very much | Very much | Somewhat | Very much | Very much | Somewhat |
| Very much | Very much | Somewhat | Somewhat | Neutral | Somewhat | Somewhat | Very much | Very much | Very much |
| Very much | Very much | Somewhat | Somewhat | Somewhat | Somewhat | Very much | Very much | Somewhat | Very much |
| Very much | Somewhat | Very much | Very much | Very much | Very much | Somewhat | Very much | Very much | Very much |
| Somewhat | Very much | Very much | Very much | Very much | Somewhat | Very much | Very much | Very much | Very much |
| Very much | Very much | | Somewhat | Very much | Very much | | Very much | Very much | Very much |
| Very much | Very much | Very much | Very much | Very much | Somewhat | Very much | Very much | Very much | Very much |
| Very much | Somewhat | Somewhat | Somewhat | Very much | Somewhat | Somewhat | Very much | Very much | Very much |
| Very much | Somewhat | Very much | Very much | | Somewhat | Very much | Very much | Very much | |
| Very much | Very much | Very much | Somewhat | Very much | Somewhat | Very much | Very much | Very much | Very much |
| Very much | Very much | Very much | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| Very much | Very much | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Very much | Very much | Very much |

| Assessment [Does the curriculum provide guidance for | Assessment [Are the summative assessments easily | Usability [Are the teacher materials user-friendly?] | Usability [Do you think you could use the teacher materials | Usability [Are the teacher materials available in languages |
|---|---|---|---|---|
| Neutral | Neutral | Somewhat | Not very | Neutral |
| Somewhat | Somewhat | Neutral | Somewhat | Neutral |
| Somewhat | Neutral | Somewhat | Very much | |
| Very much | Very much | Very much | Very much | Very much |
| Very much | Very much | Very much | Very much | Very much |
| Very much | Very much | Very much | Very much | Neutral |
| Very much | Neutral | Very much | Very much | Somewhat |
| Somewhat | Very much | Very much | Very much | Somewhat |
| Very much | Very much | Very much | Very much | Very much |
| Somewhat | Somewhat | Very much | Very much | |
| | | Very much | Very much | Very much |
| Neutral | Neutral | Neutral | Not very | Not very |
| Somewhat | Somewhat | Very much | Somewhat | |
| | | Somewhat | Very much | |
| | Somewhat | Very much | | Very much |
| Very much | Very much | Very much | Somewhat | Neutral |
| Very much | Very much | Very much | Very much | Neutral |
| Somewhat | Somewhat | Not very | Not very | Neutral |
| | | | | |
| Very much | Very much | Very much | Very much | Very much |
| Very much | Very much | Very much | Somewhat | |
| Very much | Very much | Very much | Very much | |
| Somewhat | Very much | Very much | Very much | Somewhat |
| Somewhat | Very much | Very much | Very much | Somewhat |
| Not very | Neutral | Very much | Very much | Very much |
| Very much | Very much | Very much | Very much | Very much |
| Very much | Very much | Very much | Somewhat | Somewhat |
| Very much | Very much | Very much | Very much | Somewhat |
| Very much | Very much | Very much | Very much | Very much |
| Very much | | Very much | Very much | Very much |
| Very much | Somewhat | Somewhat | Neutral | Somewhat |
| Very much | | Very much | Very much | Very much |
| Very much | Very much | Very much | Somewhat | Somewhat |
| Very much | Very much | Very much | Somewhat | Somewhat |
| | | Very much | Somewhat | |
| Very much | Very much | Very much | Very much | Somewhat |
| Very much | Very much | Very much | Very much | Very much |
| Very much | Very much | Very much | Somewhat | Somewhat |

| Overall | Comments: |
|---|---|
| I recommend NextGen FOSS for adoption. | |
| I recommend NextGen FOSS with reservations. | The labor of preparing for investigations was also a drawback for me. But had more teacher resources. |
| I recommend NextGen FOSS for adoption. | FOSS seems like the easiest curriculum to roll out and begin implementing because of its familiarity. |
| I recommend NextGen FOSS for adoption. | The new revisions in the new Foss are relevant and inclusive of all learners, in particular English language Learners. |
| I recommend NextGen FOSS for adoption. | |
| I recommend NextGen FOSS for adoption. | |
| I recommend NextGen FOSS for adoption. | FOSS has hard cover student copies of books. New online assessment tool. Useful teacher resource book. |
| I recommend NextGen FOSS for adoption. | Tried and true, with fantastic updates to align to NGSS standards. |
| I recommend NextGen FOSS for adoption. | I want to pilot the Spanish version at my site. |
| I recommend NextGen FOSS for adoption. | I appreciated the teacher resources section where the CA ELA and Math CC Standards were listed along with the applicable section in the FOSS curriculum--usually, if at all the process is reversed a science lesson includes the applicable ELA, Math Standards |
| I recommend NextGen FOSS for adoption. | |
| I do not recommend NextGen FOSS for adoption. | |
| I recommend NextGen FOSS for adoption. | |
| I recommend NextGen FOSS for adoption. | This seems to have majority of student work as activity oriented. We already know the format so less training to get it up and running in the schools. |
| I recommend NextGen FOSS for adoption. | I like FOSS and it seems as if the changes made go along with many of the practices that we have been trying to do- more note booking, discussions, more outdoor science, and more engineering. The program emphasizes hands-on experiences which is important for concept building. |
| I recommend NextGen FOSS for adoption. | it is something we are already familiar with. That helps for teachers who are already comfortable teaching FOSS and for those who are starting to teach FOSS. I would have like to have seen more in terms of how it is different from our current FOSS and how it is much better. Sorry but the presentation was dry, maybe because it was the last one and I was tired but I would like to have seen what new hands on investigations they have. |
| I do not recommend NextGen FOSS for adoption. | Very similar to current FOSS. Too much work to set-up. I love the hands on, but it needs to be simplified. This is why teachers don't open their boxes! |
| I recommend NextGen FOSS for adoption. | |
| I recommend NextGen FOSS for adoption. | |
| I recommend NextGen FOSS for adoption. | Might be easier to adopt due all of our familiarity with the current FOSS. Like the emphasis on notebooking. |
| I recommend this curriculum for adoption. | FOSS is the best by far! |
| I recommend NextGen FOSS for adoption. | FOSS has improved their already excellent curriculum. I appreciate the better integration of notebooking and focus questions. I do wish they had updated the K trees unit. :-( Otherwise it looks great and I hihgly recommend it. |
| I recommend NextGen FOSS with reservations. | |
| I recommend this curriculum for adoption. | |
| I recommend NextGen FOSS for adoption. | |
| I recommend NextGen FOSS for adoption. | FOSS, FOSS, FOSS! :0) |
| I recommend NextGen FOSS for adoption. | I like the addition of technology, outdoor activities and "what to look for" |
| I recommend NextGen FOSS for adoption. | I really like that FOSS is easy for teachers and students to access. They are direct and to the point. The hands on activities are versatile and lend themselves to a lot of questioning, talking, and writing. |

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|---|---|
| I recommend NextGen FOSS for adoption. | I wish I had 30 more minutes to think about this program before filling this out. I use FOSS, but this is still not enough time. I look forward to going online and perusing the new materials more carefully. |
| I recommend NextGen FOSS for adoption. | |
| I recommend NextGen FOSS for adoption. | |
| I recommend NextGen FOSS for adoption. | I think FOSS aligns very well with our vision of science education in Oakland. The focus questions, investigations and notebooking are excellent. I am excited about the increased outdoor education, and EL notes in each lesson, and the next steps after you assess |
| I recommend NextGen FOSS for adoption. | FOSS is tried and true. Hands-on activities and thinking like a scientist are at its heart. I like that their idea of "notebooking" is students actually using a blank notebook, and making notes in it.<br>Most OUSD teachers are at least somewhat familiar with the format and materials of FOSS. (i.e. easier learning curve across the district). That's a BIG plus. |
| I recommend NextGen FOSS for adoption. | Can't go wrong with FOSS...but I do prefer the framing of Amplify Science since it seems more problem/project based and has the students approach each investigation from the lens of a scientist or engineer. It seems like FOSS adapts well to NGSS, but I wonder if Amplify makes more sense for teaching NGSS since it was created purely based on those standards. |
| I recommend NextGen FOSS for adoption. | I think NextGenFOSS provides exploration of phenomena and promotes conceptual understanding through a combination of hands on learning, discussion, and text. |
| I recommend NextGen FOSS for adoption. | This program was the best to me. I liked looking at the actual materials, not just getting a sales pitch. |

| NGSS Alignment [Does STEMscopes provide experiences with phenomena that support deep conceptual learning?] | NGSS Alignment [Does STEMscopes have students discussing open-ended questions that focus on the strength of the evidence used to generate claims?] | NGSS Alignment [Are Science & Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts woven together so that student tasks reflect the ways that real scientists do and think about | NGSS Alignment [Is there a clear Scope and Sequence or Concept Map that shows NGSS learning progressions?] | Language, Literacy, and Common Core Connections [Does STEMscopes include embedded supports for language development?] | Language, Literacy, and Common Core Connections [Are there frequent opportunities to write in Science Notebooks for a variety of purposes, such as collecting data, developing, using, and revising models, constructing explanations based on evidence, and reflecting on their learning?] | Language, Literacy, and Common Core Connections [Does STEMscopes include frequent opportunities for students to engage in discussion and argumentation to make sense of data and deepen their understanding?] | Language, Literacy, and Common Core Connections [Will students read complex text after their investigations to deepen their understanding?] |
|---|---|---|---|---|---|---|---|
| Neutral | Neutral | Somewhat | Neutral | Neutral | Not at all | Neutral | Not at all |
| Not very | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral |
| | | Very much | | | | | |
| Somewhat | Somewhat | Very much | Very much | Somewhat | Not very | Neutral | Very much |
| Neutral | Neutral | Somewhat | Somewhat | Somewhat | Not very | Not very | Not very |
| Somewhat | Very much | Very much | | | Very much | Very much | Very much |
| Not very | Not very | Not very | Not very | Somewhat | Somewhat | Neutral | Somewhat |
| Very much | Somewhat | Very much | | Very much | Somewhat | Very much | Very much |
| Somewhat | Very much | Very much | Very much | Somewhat | Neutral | Somewhat | Somewhat |
| Somewhat | Very much | Very much | Very much | Very much | Very much | Very much | Very much |
| Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat |
| Somewhat | Somewhat | Very much | Very much | Neutral | Neutral | Neutral | Neutral |
| Neutral | Somewhat | Somewhat | Somewhat | Very much | Somewhat | Somewhat | Somewhat |
| Somewhat | Somewhat | Neutral | Somewhat | Somewhat | Somewhat | Somewhat | Neutral |
| Very much | Neutral | Very much | Very much | Very much | Very much | Neutral | Very much |
| Very much | Very much | Somewhat | Somewhat | Somewhat | Somewhat | Neutral | Somewhat |
| Not very | Somewhat | Not very | Not very | Not very | Not very | Not very | Not very |
| Not at all | Not at all | Not at all | Not at all | Not very | Not very | Not very | Not very |
| Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat |
| Somewhat | Neutral | Very much | Very much | Neutral | Very much | Neutral | Neutral |
| Very much | Neutral | Very much | | | Very much | Very much | Somewhat |
| Somewhat | Somewhat | Somewhat | Very much | Very much | Very much | Very much | Somewhat |
| Very much | Very much | | | Very much | Very much | | Very much |
| Somewhat | Somewhat | Very much | Not very | Very much | Somewhat | Neutral | Somewhat |
| Very much | Neutral | Somewhat | Somewhat | Somewhat | Neutral | Neutral | Neutral |
| Not at all | Not at all | Not very | Not at all | Neutral | Neutral | Not very | Not very |
| Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral |
| Not at all | Not at all | Not at all | Not at all | Not at all | Not at all | Not at all | Not at all |
| Very much | Very much | Very much | Very much | Very much | Somewhat | Somewhat | Very much |
| Somewhat | Somewhat | Very much | Very much | Neutral | Very much | Somewhat | Somewhat |
| Very much | Neutral | Somewhat | Somewhat | Very much | Neutral | Very much | Very much |
| Very much | Very much | Very much | Very much | Very much | Very much | Very much | Very much |

| Language, Literacy, and Common Core Connections [Does STEMscopes provide supports for mathematical thinking & data analysis?] | Equity [Do the learning experiences hook into students' prior knowledge?] | Equity [Do the learning experiences seem relevant to the lives of the students you teach?] | Equity [Do the print materials reflect the diversity of our school communities] | Equity [Are student materials available in languages other than English?] | Student Materials [Will all students be able to access the materials?] | Student Materials [Does STEMscopes include traditional tools of science (e.g. hand lenses and measuring devices) and common objects so that students can see opportunities for science in their everyday lives?] | Student Materials [Do the reading materials allow students to build on ideas from their hands-on experiences?] | Assessment [Do the assessments (formative and summative) provide information about both conceptual understanding and skills (e.g. Science and Engineering Practices)?] | Assessment [Does STEMscopes provide guidance for how to use the assessment data?] |
|---|---|---|---|---|---|---|---|---|---|
| Not very | Not very | Not very | Not very | Not very | Neutral | Neutral | Neutral | Neutral | Neutral |
| Neutral | Neutral | Neutral | Neutral | Neutral | Not very | Not very | Not very | Neutral | Somewhat |
| Somewhat | Very much | | | Somewhat | | Somewhat | | | |
| Somewhat | Very much | Somewhat | | Very much | Somewhat | | | | Very much |
| Somewhat | Neutral | Not very | Not very | Somewhat | Not very | Somewhat | Somewhat | Neutral | Neutral |
| Very much | Somewhat | Somewhat | Not at all | Very much | Not very | | Very much | Very much | |
| Neutral | Not very | Not very | Not very | Very much | Neutral | Neutral | Neutral | Neutral | Neutral |
| Somewhat | Very much | Somewhat | Very much | Very much | Somewhat | Somewhat | Very much | Very much | Somewhat |
| Somewhat | Very much | Somewhat | Somewhat | Somewhat | Not very | Somewhat | Neutral | Somewhat | Not very |
| Very much | Very much | Somewhat | Neutral | Very much | Very much | Neutral | Somewhat | Very much | Very much |
| Somewhat | Very much | Very much | Neutral | Somewhat | Neutral | Somewhat | Somewhat | Somewhat | Somewhat |
| Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral |
| Somewhat | Somewhat | Neutral | Somewhat | Somewhat | Somewhat | Somewhat | Very much | Somewhat | Somewhat |
| Neutral | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Very much | Somewhat | Somewhat | Somewhat |
| Neutral | Somewhat | | Very much | Somewhat | Somewhat | | Very much | Somewhat | |
| Neutral | Somewhat | Somewhat | Somewhat | Very much | Not very | Somewhat | Somewhat | Somewhat | Neutral |
| Somewhat | Somewhat | Neutral | Neutral | Somewhat | Somewhat | Not very | Somewhat | Not very | Somewhat |
| Not very | Not at all | Not at all | Not very | Somewhat | Not very | Not very | Not very | Not very | Not very |
| Somewhat | Very much | Very much | Neutral | Neutral | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat |
| Neutral | Neutral | Very much | Neutral | Somewhat | Very much | Neutral | Very much | Neutral | Neutral |
| | Very much | Very much | | Somewhat | Somewhat | Neutral | Somewhat | Somewhat | |
| Somewhat | Somewhat | Neutral | Neutral | Very much | Somewhat | Very much | Somewhat | Very much | Very much |
| | Very much | | | Somewhat | Very much | | | Very much | Very much |
| Somewhat | Neutral | Somewhat | | Somewhat | Not very | Not very | | Somewhat | |
| Neutral | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Neutral | Neutral |
| Neutral | Not very | Not very | Neutral | Very much | Neutral | Not very | Not very | Neutral | Neutral |
| Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral |
| Not at all | Not at all | Not at all | Not at all | Not at all | Not at all | Not at all | Not at all | Not at all | Not at all |
| Very much | Neutral | Somewhat | Neutral | Very much | Neutral | Very much | Very much | Very much | Very much |
| Neutral | Very much | Neutral | Neutral | Not at all | Not very | Not very | Not very | Not very | |
| Very much | Somewhat | Very much | Neutral | Very much | Somewhat | Neutral | Very much | Neutral | Very much |
| Very much | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat | Somewhat |

| Overall | Comments: |
|---|---|
| I do not recommend STEMscopes for adoption. | |
| I do not recommend STEMscopes for adoption. | Boring. Where is explore? |
| I do not recommend STEMscopes for adoption. | Very much dependent on technology access, many ousd schools are not at a point where a tech-based curriculum can be successfully implemented, hands-on materials seemed scarce, student materials/workbook seemed cumbersome |
| I do not recommend STEMscopes for adoption. | I was impressed by the ability to generate materials lists, as well as the materials (songs!) they had in Spanish. I was not a fan of how the student texts are worked into a consumable book, making it large, clunky, and needing to be replaced each year. |
| I do not recommend STEMscopes for adoption. | |
| I do not recommend STEMscopes for adoption. | |
| I do not recommend STEMscopes for adoption. | It is digital dependent. Each class would need a set of Chromebooks in order to have full access. |
| I recommend STEMscopes with reservations. | I liked many of the aspects of the STEMscopes program, at least by the description. I liked the 5E organization and the integration of many engineering challenges. The program seemed to emphasize real world scenerios which I though was very cool. It seemed as if they had some strong video components as well. The readings (and math) at 3 different level also seemed very beneficial. would be concerned for teachers. classes, or schools that didn't have consistent computer access because that seemed important for the program. |
| I recommend STEMscopes with reservations. | |
| I recommend STEMscopes with reservations. | Too much computer based. |
| I do not recommend STEMscopes for adoption. | |
| I do not recommend STEMscopes for adoption. | It is very hard to make decisions on curriculum materials when you don't get to look at the actual materials. Based on the presentation, I like the 5E lesson model, but really don't like pre-printed student "notebooks." |
| I recommend STEMscopes with reservations. | I liked the 5 E alignment and the tabs that support this, liked the career connections. I think teachers would like the aspect of SREMscope scoring multiple choice answers. |
| I do not recommend STEMscopes for adoption. | Looks like a pile of something a Texas Longhorn left behind. |
| I recommend STEMscopes with reservations. | A 30 minute lightning-fast presentation is not enough to base a decision on. I want to go online and explore the materials. I like the 5E lesson plan format very much, and the STEMscopes online resources seem accessible and useful. I would not use the preprinted notebooks at all, and if we get this program we should definitely not order those. Students wouldn't refer to them to reflect on their own thinking, as they do with notebooks that students have created themselves. Many of my answers above are "Somewhat" or "Neutral" just because I don't have enough information yet. |
| I recommend STEMscopes with reservations. | There was a lot I liked. The well-organized website, editable lesson plans and assessments, leveled reading, focus on claims and evidence, hooks to videos and texts. Concerned about availability of enough technology..... |
| I recommend STEMscopes with reservations. | It seems as thought the materials are mostly available online and the opportunities to use technology in the classroom can be limited. Chromebook carts are shared resources that must be used in most content areas. |
| I do not recommend STEMscopes for adoption. | I don't think I saw enough of the materials to make a judgement on some of the questions, but from what I saw the hands-on experiences will not provide the kind of deep conceptual learning that we want our students to have. The way the units are set up does not allow our students to engage with science the way that real scientists do. The materials seem difficult to access and a little confusing. |
| I do not recommend STEMscopes for adoption. | The materials were not teacher or student friendly. The information is difficult to navigate. The science is far removed from the experience. It was mostly about navigating the digital platform. |
| I do not recommend STEMscopes for adoption. | |
| I do not recommend STEMscopes for adoption. | Differentiated reading levels of student text. Program does not come with hard cover student texts. |
| I do not recommend STEMscopes for adoption. | |
| I do not recommend STEMscopes for adoption. | Stemscopes provides a lot of online resources for tech savvy teachers. Our teachers at our school are not going to spend time getting to know the resources or using the website. We don't have enough teachers willing to learn the new technology. Although everything is translated into Spanish, I do not see enough culturally different examples/information included for all of our many different cultural students. |

| | |
|---|---|
| I recommend STEMscopes with reservations. | Love the way the hands-on materials are packaged, grouped for each lesson so you don't have to search around for what you need. Also a fan of the way you can input number of students and groups online and it gives you an accurate count of how many materials you'll need for the lesson. THE STUDENT NOTEBOOKS ARE TERRIBLE!!! The notebooks are too bulky and contain the readers in them but are consumable, meaning you basically throw away the student readers annually! The font is awful in those notebooks too! The presenters didn't give us a clear idea of what the hands-on activities are, so I can't speak to that. The online resources, however are really great! It seems like there are many opportunities for scaffolding, intervention, assessment. This didn't seem like as cohesive a program as the others, though. It did seem like the literacy integration was strong. |
| I do not recommend STEMscopes for adoption. | |
| I do not recommend STEMscopes for adoption. | |
| I do not recommend STEMscopes for adoption. | |
| I do not recommend STEMscopes for adoption. | pros: 5E's<br>Cons: Workbook in lieu of notebook. only viewed online teacher materials, asked to see student materials, hardcopy TE and never saw them. Cannot recommend. |
| I do not recommend STEMscopes for adoption. | I don't know this curriculum well enough to make a recommendation. I worry about it being computer heavy. We don't have enough computers for students at our school and would not be able to teach this curriculum without the district investing in a lot more computers. |
| I do not recommend STEMscopes for adoption. | It wasn't clear from the presentation how this curriculum looks in action. Little mention of hands-on experiences, what the learning looks like in the classroom. Far too much time spent navigating the website with little context. |
| I recommend STEMscopes for adoption. | I like the cirriculum but the accessibility to Chromebooks would be a challange for schools that have to share. I think the paperback books would be difficult to upkeep. |
| I do not recommend STEMscopes for adoption. | too many videos, i think they're should be more of an emphasis on journal writing, proving claims and evidence, writing in student language, not preformatted |
| I do not recommend STEMscopes for adoption. | |

**Appendix O—Community Engagement Events: Publicity**

OUSD Science

# K-5 NGSS Curriculum Review Community Forums

| Tuesday, June 6<br>3:00-5:00 | Wednesday, June 7<br>2:00-3:00 | Thursday, June 8<br>2:00-3:00 |
|---|---|---|
| Esperanza Elementary<br>10315 E St.<br>Oakland, CA 94603<br>Room B2 | Crocker Highlands<br>525 Midcrest Rd.<br>Oakland, CA 94610<br>Rm. 21 | Hoover Elementary<br>890 Brockhurst St.<br>Oakland, CA 94608<br>Rm. 17 |

Drop in during the session hours to:

- ★ Learn about the Next Generation Science Standards (NGSS)
- ★ Learn about the curriculum adoption process for OUSD and California
- ★ Preview leading curriculum options
- ★ Make recommendations to the district

NGSS Curriculum Review Sessions are open to all OUSD teachers, families, and community members.

For more information or questions, contact Elementary Science Coordinator Brenda.Tuohy@ousd.org.

**Appendix O—Community Engagement Events: Publicity**

OUSD Science

# K-5 "NGSS" Análisis curricular

# Foro Comunitario

| Martes 6 de junio<br>3:00-5:00 | Miércoles 7 de junio<br>2:00-3:00 | Jueves 8 de junio<br>2:00-3:00 |
|---|---|---|
| Esperanza Elementary<br>10315 E St.<br>Oakland, CA 94603<br>Room B2 | Crocker Highlands<br>525 Midcrest Rd.<br>Oakland, CA 94610<br>Room 21 | Hoover Elementary<br>890 Brockhurst St.<br>Oakland, CA 94608<br>Room 17 |

Visite una de estas escuelas durante las horas anunciadas para que:

- ★ Conozca la Nueva Generación de Estándares de Ciencia (NGSS)
- ★ Aprenda acerca del proceso de adopción curricular para OUSD y California
- ★ Compare las opciones curriculares
- ★ Haga recomendaciones al distrito

Sesiones de Análisis del Currículo del NGSS están abiertas para todos los maestros, familias y miembros de la comunidad de OUSD.

Para más información o preguntas, comuníquese con Coordinador de Ciencias Elementales Brenda.Tuohy@ousd.org.

## Appendix O—Community Engagement Events: Publicity

OUSD Science

FOR IMMEDIATE RELEASE

Elementary Science Curriculum Review Sessions

June 1, 2016 – Curriculum Adoption for the Next Generation Science Standards (NGSS) will occur across California in the 2018-2019 school year. The OUSD Science Department is preparing for the transition to full implementation of NGSS in grades K-5.

The OUSD Science Department began looking at NGSS-aligned curriculum in 2016 with nine other districts across California through the NGSS Early Implementation Initiative. Seven NGSS curricula were piloted by teacher leaders in the project. The top three curricula are being reviewed by stakeholders in OUSD in Spring 2017.

On Saturday, May 20, 2017 42 teachers from 39 schools reviewed NGSS curriculum options for OUSD. 72% of elementary schools were represented. Next week the OUSD Science Department is hosting three additional meetings to get feedback from teachers and community members about NGSS science curriculum.

The first session in on June 6, 2017 from 3:00-5:00 PM in room 32 of Esperanza Elementary School, 10315 E St. The second second session is Wednesday, June 7 from 2:00-3:00 in room 21 of Crocker Highlands, 525 Midcrest Rd. The final session is Thursday, June 8 from 2:00-3:00 in room 17 of Hoover Elementary at 890 Brockhurst Street.

Contact:
Brenda Tuohy
Elementary Science Coordinator
brenda.tuohy@ousd.org
C. (501) 501-8970

## Appendix O—Community Engagement Events: Publicity

## Appendix P—Login Information

OUSD Science

### Trial Login Information

| | |
|---|---|
| Amplify Science | 1. Go to learning.amplify.com/demo<br>2. Enter username: t.ousd@tryamplify.net<br>3. Enter password: AmplifyNumber1<br>4. At the Clever portal page, click the Amplify Curriculum icon |
| FOSS Next Generation | 1. Go to FOSSweb.com<br>2. Register for a free account<br>3. Login to your account<br>4. Enter your access code: **K8FOSSNG60** |
| STEMscopes K-12 | 1. Go to https://n11066d17763.acceleratelearning.com<br>2. Enter username: teacher<br>3. Enter password: science |

OUSD Science

K-5 NGSS Curriculum Review Community Forums



# Feedback Form

## Amplify

Are the materials user-friendly for teachers?
**(low) 1 2 (3) 4 5 (high)**

Are the materials engaging for kids?
**(low) 1 2 (3) 4 5 (high)**

Does the curriculum support all kids *doing* science?
**(low) 1 2 (3) 4 5 (high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 2 (3) 4 5 (high)**

Comments:

## NextGen FOSS

Are the materials user-friendly for teachers?
**(low) 1 2 3 4 (5 high)**

Are the materials engaging for kids?
**(low) 1 2 3 4 (5 high)**

Does the curriculum support all kids *doing* science?
**(low) 1 2 3 4 (5 high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 2 3 4 (5 high)**

Comments:

## STEMscopes

Are the materials user-friendly for teachers?
**(low) (1) 2 3 4 5 (high)**

Are the materials engaging for kids?
**(low) (1) 2 3 4 5 (high)**

Does the curriculum support all kids *doing* science?
**(low) 1 (2) 3 4 5 (high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 (2) 3 4 5 (high)**

Comments:

Please rank the three programs in order of your interest:

1. (HIGHEST) FOSS
2. Amplify
3. STEM Scope

OUSD Science



K-5 "NGSS" Análisis curricular Foro Comunitario

# Formulario de Comentarios

## Amplify

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 (más alto) 5

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 (más alto) 5

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 (más alto) 5

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 (más alto) 5

Comments:

## NextGen FOSS

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 (más alto) 5

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 (más alto) 5

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 (más alto) 5

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 (más alto) 5

Comments:

## STEMscopes

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 (más alto) 5

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 (más alto) 5

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 (más alto) 5

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 (más alto) 5

Comments:

Por favor clasifique los tres programas en orden de su interés:

1. (más alto)_____

2. _____

3. (más bajo)_____

OUSD Science

K-5 NGSS Curriculum Review Community Forums



# Feedback Form

## Amplify

Are the materials user-friendly for teachers?
**(low) 1 2 (3) 4 5 (high)**

Are the materials engaging for kids?
**(low) 1 2 (3) 4 5 (high)**

Does the curriculum support all kids *doing* science?
**(low) 1 2 (3) 4 5 (high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 2 3 (4) 5 (high)**

Comments:

## NextGen FOSS

Are the materials user-friendly for teachers?
**(low) 1 2 3 (4) 5 (high)**

Are the materials engaging for kids?
**(low) 1 2 3 (4) 5 (high)**

Does the curriculum support all kids *doing* science?
**(low) 1 2 3 (4) 5 (high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 2 3 (4) 5 (high)**

Comments:

## STEMscopes

Are the materials user-friendly for teachers?
**(low) 1 2 (3) 4 5 (high)**

Are the materials engaging for kids?
**(low) 1 (2) 3 4 5 (high)**

Does the curriculum support all kids *doing* science?
**(low) 1 (2) 3 4 5 (high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 2 (3) 4 5 (high)**

Comments:

Please rank the three programs in order of your interest:

1. (HIGHEST) NextGen FOSS
2. Amplify
3. STEMScopes

OUSD Science



K-5 "NGSS" Análisis curricular Foro Comunitario

# Formulario de Comentarios

## Amplify

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 5 (más alto)

Comments:

## NextGen FOSS

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 5 (más alto)

Comments:

## STEMscopes

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 5 (más alto)

Comments:

Por favor clasifique los tres programas en orden de su interés:

1. (más alto)_____

2. _____

3. (más bajo)_____

OUSD Science

K-5 NGSS Curriculum Review Community Forums



# Feedback Form

## Amplify

Are the materials user-friendly for teachers?
**(low) 1 2 3 4 5 (high)**

Are the materials engaging for kids?
**(low) 1 2 3 4 5 (high)**

Does the curriculum support all kids *doing* science?
**(low) 1 2 3 4 5 (high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 2 3 4 5 (high)**

Comments:

## NextGen FOSS

Are the materials user-friendly for teachers?
**(low) 1 2 3 (4) 5 (high)**

Are the materials engaging for kids?
**(low) 1 2 3 (4) 5 (high)**

Does the curriculum support all kids *doing* science?
**(low) 1 2 3 (4) 5 (high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 2 3 (4) 5 (high)**

Comments: NEW LAYOUT OF TEACHER'S GUIDE IS REALLY NICE AND MUCH MORE CONCISE AND USABLE.

## STEMscopes

Are the materials user-friendly for teachers?
**(low) 1 2 3 4 5 (high)**

Are the materials engaging for kids?
**(low) 1 2 3 4 5 (high)**

Does the curriculum support all kids *doing* science?
**(low) 1 2 3 4 5 (high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 2 3 4 5 (high)**

Comments:

Please rank the three programs in order of your interest:

1. (HIGHEST) FOSS
2. AMPLIFY
3. STEM SCOPES

OUSD Science

K-5 "NGSS" Análisis curricular Foro Comunitario

# Formulario de Comentarios

## Amplify

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 (más alto) 5

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 (más alto) 5

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 (más alto) 5

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 (más alto) 5

Comments:

## NextGen FOSS

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 (más alto) 5

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 (más alto) 5

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 (más alto) 5

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 (más alto) 5

Comments:

## STEMscopes

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 (más alto) 5

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 (más alto) 5

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 (más alto) 5

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 (más alto) 5

Comments:

Por favor clasifique los tres programas en orden de su interés:

1. (más alto)_____

2. _____

3. (más bajo)_____

OUSD Science

K-5 NGSS Curriculum Review Community Forums



# Feedback Form

## Amplify

Are the materials user-friendly for teachers?
**(low) 1** 2 3 4 5 **(high)**

Are the materials engaging for kids?
**(low) 1** 2 3 4 5 **(high)**

Does the curriculum support all kids *doing* science?
**(low) 1** 2 3 4 5 **(high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1** 2 3 4 5 **(high)**

Comments:

## NextGen FOSS

Are the materials user-friendly for teachers?
**(low) 1** 2 3 4 5 **(high)**

Are the materials engaging for kids?
**(low) 1** 2 3 4 5 **(high)**

Does the curriculum support all kids *doing* science?
**(low) 1** 2 3 4 5 **(high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1** 2 3 4 5 **(high)**

Comments:

## STEMscopes

Are the materials user-friendly for teachers?
**(low) 1** 2 3 4 5 **(high)**

Are the materials engaging for kids?
**(low) 1** 2 3 4 5 **(high)**

Does the curriculum support all kids *doing* science?
**(low) 1** 2 3 4 5 **(high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1** 2 3 4 5 **(high)**

Comments: The curriculum is unrealistic and not thought out well.

Please rank the three programs in order of your interest:

1. (HIGHEST) _____
2. _____
3. _____

OUSD Science

K-5 "NGSS" Análisis curricular Foro Comunitario

# Formulario de Comentarios

## Amplify

¿Son los materiales útiles para los profesores?

(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?

(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?

(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?

(más bajo) 1 2 3 4 5 (más alto)

Comments:

## NextGen FOSS

¿Son los materiales útiles para los profesores?

(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?

(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?

(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?

(más bajo) 1 2 3 4 5 (más alto)

Comments:

## STEMscopes

¿Son los materiales útiles para los profesores?

(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?

(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?

(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?

(más bajo) 1 2 3 4 5 (más alto)

Comments:

Por favor clasifique los tres programas en orden de su interés:

1. (más alto)_____

2. _____

3. (más bajo)_____

OUSD Science

K-5 NGSS Curriculum Review Community Forums



# Feedback Form

## Amplify

Are the materials user-friendly for teachers?
**(low) 1 2 3 (4) 5 (high)**

Are the materials engaging for kids?
**(low) 1 2 3 (4) 5 (high)**

Does the curriculum support all kids *doing* science?
**(low) 1 2 (3) 4 5 (high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 2 3 (4) 5 (high)**

Comments:

## NextGen FOSS

Are the materials user-friendly for teachers?
**(low) 1 2 3 4 5 (high)**

Are the materials engaging for kids?
**(low) 1 2 3 4 5 (high)**

Does the curriculum support all kids *doing* science?
**(low) 1 2 3 4 5 (high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 2 3 4 (5) (high)**

Comments:

## STEMscopes

Are the materials user-friendly for teachers?
**(low) 1 2 (3) 4 5 (high)**

Are the materials engaging for kids?
**(low) 1 2 3 (4) 5 (high)**

Does the curriculum support all kids *doing* science?
**(low) 1 2 (3) 4 5 (high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 2 (3) (4) 5 (high)**

Comments:

Please rank the three programs in order of your interest:

1. (HIGHEST) Next Gen FOSS
2. Amplify
3. STEMscopes

OUSD Science

K-5 "NGSS" Análisis curricular Foro Comunitario

# Formulario de Comentarios

## Amplify

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 5 (más alto)

Comments:

## NextGen FOSS

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 5 (más alto)

Comments:

## STEMscopes

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 5 (más alto)

Comments:

Por favor clasifique los tres programas en orden de su interés:

1. (más alto)_____

2. _____

3. (más bajo)_____

OUSD Science

K-5 NGSS Curriculum Review Community Forums



# Feedback Form

## Amplify

Are the materials user-friendly for teachers?
**(low) 1 2 3 4 5 (high)**

Are the materials engaging for kids?
**(low) 1 2 3 4 5 (high)**

Does the curriculum support all kids *doing* science?
**(low) 1 2 3 4 5 (high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 2 3 4 5 (high)**

Comments:

## NextGen FOSS

Are the materials user-friendly for teachers?
**(low) 1 2 3 4 5 (high)**

Are the materials engaging for kids?
**(low) 1 2 3 4 5 (high)**

Does the curriculum support all kids *doing* science?
**(low) 1 2 3 4 5 (high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 2 3 4 5 (high)**

Comments:

## STEMscopes

Are the materials user-friendly for teachers?
**(low) 1 2 3 4 5 (high)**

Are the materials engaging for kids?
**(low) 1 2 3 4 5 (high)**

Does the curriculum support all kids *doing* science?
**(low) 1 2 3 4 5 (high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 2 3 4 5 (high)**

Comments:

Please rank the three programs in order of your interest:

1. (HIGHEST) NextGen FOSS
2. _____
3. _____

I like (1) the continuity of fu
(2) like the guides
(3) like student textbooks

OUSD Science

K-5 "NGSS" Análisis curricular Foro Comunitario

# Formulario de Comentarios

## Amplify

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 5 (más alto)

Comments:

## NextGen FOSS

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 5 (más alto)

Comments:

## STEMscopes

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 5 (más alto)

Comments:

Por favor clasifique los tres programas en orden de su interés:

1. (más alto)_____

2. _____

3. (más bajo)_____

OUSD Science

K-5 NGSS Curriculum Review Community Forums



# Feedback Form

## Amplify

Are the materials user-friendly for teachers?
**(low) 1 2 3 4 5 (high)**

Are the materials engaging for kids?
**(low) 1 2 3 4 5 (high)**

Does the curriculum support all kids *doing* science?
**(low) 1 2 3 4 5 (high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 2 3 4 5 (high)**

Comments:

## NextGen FOSS

Are the materials user-friendly for teachers?
**(low) 1 2 3 (4) 5 (high)**

Are the materials engaging for kids?
**(low) 1 2 3 4 5 (high)**

Does the curriculum support all kids *doing* science?
**(low) 1 2 3 (4) 5 (high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 2 (3 4) 5 (high)**

Comments:

## STEMscopes

Are the materials user-friendly for teachers?
**(low) 1 2 3 4 5 (high)**

Are the materials engaging for kids?
**(low) 1 2 3 4 5 (high)**

Does the curriculum support all kids *doing* science?
**(low) 1 2 3 4 5 (high)**

Does the curriculum provide students opportunities to develop language and literacy?
**(low) 1 2 3 4 5 (high)**

Comments:

Please rank the three programs in order of your interest:

1. (HIGHEST) _____
2. _____
3. _____

OUSD Science

K-5 "NGSS" Análisis curricular Foro Comunitario

# Formulario de Comentarios

## Amplify

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 5 (más alto)

Comments:

## NextGen FOSS

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 5 (más alto)

Comments:

## STEMscopes

¿Son los materiales útiles para los profesores?
(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?
(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?
(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?
(más bajo) 1 2 3 4 5 (más alto)

Comments:

Por favor clasifique los tres programas en orden de su interés:

1. (más alto)_____

2. _____

3. (más bajo)_____

OUSD Science

K-5 NGSS Curriculum Review Community Forums

# Feedback Form

## Amplify

Are the materials user-friendly for teachers?
(low) 1 2 3 4 5 (high)

Are the materials engaging for kids?
(low) 1 2 3 4 5 (high)

Does the curriculum support all kids *doing* science? not sure
(low) 1 2 3 4 5 (high)

Does the curriculum provide students opportunities to develop language and literacy?
(low) 1 2 3 4 5 (high)

Comments:

## NextGen FOSS

Are the materials user-friendly for teachers?
(low) 1 2 3 4 5 (high)

Are the materials engaging for kids?
(low) 1 2 3 4 5 (high)

Does the curriculum support all kids *doing* science?
(low) 1 2 3 4 5 (high)

Does the curriculum provide students opportunities to develop language and literacy?
(low) 1 2 3 4 5 (high)

Comments:

## STEMscopes

Are the materials user-friendly for teachers?
(low) 1 2 3 4 5 (high)

Are the materials engaging for kids?
(low) 1 2 3 4 5 (high)

Does the curriculum support all kids *doing* science?
(low) 1 2 3 4 5 (high)

Does the curriculum provide students opportunities to develop language and literacy?
(low) 1 2 3 4 5 (high)

Comments:

Please rank the three programs in order of your interest:

1. (HIGHEST) _____
2. _____
3. _____

OUSD Science

K-5 "NGSS" Análisis curricular Foro Comunitario

# Formulario de Comentarios

## Amplify

¿Son los materiales útiles para los profesores?

(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?

(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?

(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?

(más bajo) 1 2 3 4 5 (más alto)

Comments:

## NextGen FOSS

¿Son los materiales útiles para los profesores?

(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?

(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?

(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?

(más bajo) 1 2 3 4 5 (más alto)

Comments:

## STEMscopes

¿Son los materiales útiles para los profesores?

(más bajo) 1 2 3 4 5 (más alto)

¿Los materiales son atractivos para los niños?

(más bajo) 1 2 3 4 5 (más alto)

¿El plan de estudios apoya a todos los niños que hacen ciencia?

(más bajo) 1 2 3 4 5 (más alto)

¿Provee el currículo a los estudiantes oportunidades para desarrollar el lenguaje y la alfabetización?

(más bajo) 1 2 3 4 5 (más alto)

Comments:

Por favor clasifique los tres programas en orden de su interés:

1. (más alto) _____

2. _____

3. (más bajo) _____

Science

## K-5 NGSS Curriculum Review SIGN IN Sheet

School: Crocker Highlands Date: 6/7/17

| | Name | School | Position/Role |
|---|---|---|---|
| 1 | Beth Eng | Crocker | 3rd gr. teacher |
| 2 | Bianca Dino | Crocker | 3rd grade teacher |
| 3 | Iris Wheeler | Crocker | 4/5th Grade Teacher |
| 4 | Kate Speers | Crocker | 5th grade |
| 5 | Carrie Orgitsky | Crocker | Volunteer - |
| 6 | Pamela Asuncion | Crocker | Teacher-2nd |
| 7 | Naomi Bernstein | Crocker | Teacher-4th |
| 8 | Karen Kucharski | Crocker | Teacher 4th |
| 9 | T. LABARRO | Crocker | Teacher 1st |
| 10 | Melanie Murray Schurr | Crocker | Teacher 1st |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |

Science

## K-5 NGSS Curriculum Review SIGN IN Sheet

School: Hoover Date: 5/8/17

| | Name | School | Position/Role |
|---|---|---|---|
| 1 | Annika McPeek | Hoover | engineering teacher |
| 2 | Gillian Bailey | Hoover | Lit: TSA. |
| 3 | Michelle Fiorini | Hoover | Teacher |
| 4 | Eileen Lindley | Hoover | teacher |
| 5 | LaTasha Ellison | Hoover | teacher |
| 6 | NORA BARICH | HOOVER | KINDER TEACHER |
| 7 | Mark Lavie | Hoover | Teacher |
| 8 | Maria Lapointe | Hoover | teacher |
| 9 | Kate Sbarsi | Hoover | TK/K teacher |
| 10 | [illegible] | Hoover | 2nd Grade |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |

**Appendix R—Community Engagement Sessions: Sign-in Sheets**

Science

## K-5 NGSS Curriculum Review SIGN IN Sheet

School: Esperanza Date: 6/6/17

| | Name | School | Position/Role |
|---|---|---|---|
| 1 | Brenda Turley | OUSD Science | Coordinator |
| 2 | Gilberto Heredia | ~~elas~~ Esperanza | Teacher |
| 3 | BETH KEER | OUSD SCIENCE | SPECIALIST |
| 4 | Damić Celić-Mariano | Esperanza | TCHR. |
| 5 | Molly Bartram | Esperanza | Tchr. |
| 6 | Desiree fdez | Esperanza | Tchr. |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |

## Appendix S—Pricing Information

Amplify Science

# Elementary School

**Individual units, per teacher license**

| One Year | 2 Years | 3 Years | 4 Years | 5 Years | 6 Years | 7 Years | 8 Years |
|---|---|---|---|---|---|---|---|
| $25 | $49 | $72 | $94 | $115 | $135 | $154 | $172 |

Note: All Elementary School licenses are per teacher, per school year.

**Additional student investigation notebooks** (optional)
Kindergarten notebooks = $1.99 each  First Grade notebooks = $2.50 each  Second–Fifth Grade notebooks = $3.99 each

**Unit Kits** = see pricing below

**What's included in each kit:**

- Sufficient hands-on materials for 1 teacher with 2 classes of 36 students each
- One student investigation notebook (additional copies available for purchase)
- 18 copies of 5 unit-specific student informational books

| Grade | Unit Name | Price |
|---|---|---|
| | **Starter Kit** (goggles, non-latex gloves, trays, etc.) | $255 |
| Kindergarten | Needs of Plants and Animals | $895 |
| | Pushes and Pulls | $925 |
| | Sunlight and Weather | $795 |
| First Grade | Animal and Plant Defenses | $750 |
| | Light and Sound | $1,195 |
| | Spinning Earth | $570 |
| Second Grade | Plant and Animal Relationships | $835 |
| | Properties of Materials | $925 |
| | Changing Landforms | $795 |
| Third Grade | Inheritance and Traits | $805 |
| | Environments and Survival | $1,495 |
| | Balancing Forces | $725 |
| | Weather and Climate | $1,150 |
| Fourth Grade | Vision and Light | $1,295 |
| | Energy Conversions | $820 |
| | Waves, Energy, and Information | $650 |
| | Earth's Features | $675 |
| Fifth Grade | Ecosystem Restoration | $995 |
| | Modeling Matter | $850 |
| | Patterns of Earth and Sky | $475 |
| | The Earth System | $795 |

*All prices subject to change

# FOSS® Next Generation™ Conversion Kits

## Upgrading from FOSS California Edition

**Step 1:** For each module, choose to purchase a new kit (with or without student books) or a conversion kit
**Step 2:** If you selected a new kit without student books **or** a conversion kit, select your desired student book option

| Grade | FOSS Next Generation Purchase New Kits: Traditional Kit | FOSS Next Generation Purchase New Kits: Kit w/o Student Books | Purchase Conversion Kits: Converts from: | Student Books Options & Pricing |
|---|---|---|---|---|
| 5 | Mixtures and Solutions PN: 1487666 Price: $1,324 | PN: 1526717 Price: $986 | CA Mixtures and Solutions PN: 1527456 Price: $484 | **Title-specific books:** $14 each, $169 for 16<br>**Grade-level book:** $27 each (hardcover)<br>**eBooks:** $179 for premium online class access<br>*Title-specific and Grade-level books also available in Spanish!* |
| | Earth and Sun PN: 1530365 Price: $1,289 | PN: 1530367 Price: $951 | CA Water Planet PN: 1530734 Price: $689 | |
| | Living Systems PN: 1487665 Price: $1,214 | PN: 1531197 Price: $876 | CA Living Systems PN: 1532312 Price: $744 | |
| 4 | Energy PN: 1487660 Price: $1,589 | PN: 1521020 Price: $1,251 | CA Magnetism and Electricity PN: 1522695 Price: $822 | **Title-specific books:** $14 each, $169 for 16<br>**Grade-level book:** $27 each (hardcover)<br>**eBooks:** $179 for premium online class access<br>*Title-specific and Grade-level books also available in Spanish!* |
| | Soils, Rocks, and Landforms PN: 1487664 Price: $1,234 | PN: 1515868 Price: $896 | CA Solid Earth PN: 1516500 Price: $499 | |
| | Environments PN: 1487661 Price: $1,214 | PN: 1514851 Price: $876 | CA Environments PN: 1515578 Price: $484 | |
| 3 | Motion and Matter PN: 1487657 Price: $1,074 | PN: 1494920 Price: $736 | *No Conversion; customer should purchase new kit* | **Title-specific books:** $14 each, $169 for 16<br>**Grade-level book:** $27 each (hardcover)<br>**eBooks:** $179 for premium online class access<br>*Title-specific and Grade-level books also available in Spanish!* |
| | Water and Climate PN: 1487659 Price: $1,114 | PN: 1493953 Price: $776 | *No Conversion; customer should purchase new kit* | |
| | Structures of Life PN: 1487658 Price: $1,104 | PN: 1494921 Price: $766 | CA Structures of Life PN: 1512374 Price: $445 | |
| 2 | Solids and Liquids PN: 1487655 Price: $1,079 | PN: 1507024 Price: $883 | CA Solids and Liquids PN: 1513887 Price: $500 | **Title specific books:** $6.95 each, $49.95 for 8<br>**Grade-level book:** $27 each (hardcover)<br>**eBooks:** $159 for premium online class access<br>*Title-specific and Grade-level books also available in Spanish!* |
| | Pebbles, Sand, and Silt PN: 1509827 Price: $934 | PN: 1509828 Price: $738 | CA Pebbles, Sand, and Silt PN: 1513882 Price: $445 | |
| | Insects and Plants PN: 1487653 Price: $869 | PN: 1508736 Price: $673 | CA Insects and Plants PN: 1513872 Price: $385 | |
| 1 | Sound and Light PN: 1487651 Price: $969 | PN: 1517925 Price: $773 | *No Conversion; customer should purchase new kit* | **Title-specific books:** $6.95 each, $49.95 for 8<br>**Grade-level book:** $27 each (hardcover)<br>**eBooks:** $159 for premium online class access<br>*Title-specific and Grade-level books also available in Spanish!* |
| | Air and Weather PN: 1487650 Price: $789 | PN: 1512129 Price: $593 | CA Air and Weather PN: 1513824 Price: $345 | |
| | Plants and Animals PN: 1487652 Price: $814 | PN: 1512228 Price: $618 | CA Plants and Animals PN: 1513852 Price: $385 | |
| K | Materials and Motion PN: 1487648 Price: $864 | PN: 1533403 Price: $668 | CA Wood and Paper PN: 1533683 Price: $454 | **Title-specific books:** $6.95 each, $49.95 for 8<br>**Grade-level book:** $27 each (hardcover)<br>**eBooks:** $159 for premium online class access<br>*Title-specific and Grade-level books also available in Spanish!* |
| | Trees and Weather PN: 1487649 Price: $929 | PN: 1533267 Price: $733 | CA Trees PN: 1533387 Price: $440 | |
| | Animals Two by Two PN: 1487647 Price: $784 | PN: 1527619 Price: $588 | CA Animals Two by Two PN: 1527602 Price: $434 | |

*See back page for important additional details*

deltaeducation.com/FOSSNG

## Appendix S—Pricing Information

K-12

# STEMSCOPES CA-NGSS PRICING

STEMscopes CA-NGSS was built to be affordable for both large and small districts/campuses. As the lowest cost provider of high-quality, digital STEM curriculum, STEMscopes CA NGSS leverages a bulk pricing model to drive hands-on materials and print costs down making resupplying your consumables easy and inexpensive. Create a custom quote at **stemstore.acceleratelearning.com**.

**Annual STEMscopes Digital Pricing**
Teacher materials are free with student subscriptions. Pricing is based on per student.

| Subscription Length | Any Grade (K-12) |
|---|---|
| 1-3 Year Subscription | $5.95 |
| 4-5 Year Subscription | $5.70 |
| 6-8 Year Subscription | $5.45 |

**Hands-on Kits and Consumbale Kits**
Princing is based on 24 students (K-4) and 32 students (5-8)

| Grade | Hands-On Kit (Year 1) | Consumable Kit (Year 2+) |
|---|---|---|
| Kindergarten | $690.00 | $410.00 |
| 1st Grade | $650.00 | $305.00 |
| 2nd Grade | $955.00 | $610.00 |
| 3rd Grade | $685.00 | $335.00 |
| 4th Grade | $1,135.00 | $410.00 |
| 5th Grade | $1,310.00 | $525.00 |
| 6th Grade | $1,765.00 | $820.00 |
| 7th Grade | $2,610.00 | $1,435.00 |
| 8th Grade | $3,225.00 | $795.00 |

**Print Bundles**
Pricing is based on per student—STEMscopedia, Science Literacy, and Explore Journal books

| Elementary School Bundle (K-3) | Elementary School Bundle (4-5) | CA Integrated (6-8) |
|---|---|---|
| $19.95 | $22.95 | $28.95 |
| Earth & Space / Physical / Life Science | $26.95 | |

Katherine Del Carlo, STEM Account Manger | (707) 337-0358 | kdelcarlo@acceleratelearning.com

2.28.17

learn more at acceleratelearning.com | 800-531-0864 Accelerate Learning RICE

## Appendix T—Sample FOSS Rotation Schedule

### OUSD FOSS Kit Rotation Schedule 2016-2017

Updated 02/17/2017

| School Name | Pick Up & Delivery Dates | | | | Kit Strand Schedule | | | TK | K | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | August | Winter | Spring | June | Fall | Winter | Spring | | | | | | | | |
| Acorn Woodland | 8/16, Tue | 11/29, Tue | 3/7, Tue | 6/5, Mon | Earth | Life | Physical | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 12 |
| Allendale | 8/23, Tue | 11/16, Wed | 3/1, Wed | 6/2, Fri | Physical | Earth | Life | 2 | 4 | 4 | 4 | 3 | 3 | 3 | 23 |
| Bella Vista | 8/24, Wed | 11/29, Tue | 3/7, Tue | 6/2, Fri | Life | Physical | Earth | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 19 |
| Bridges Academy | 8/23, Tue | 11/17, Thur | 3/2, Thur | 5/31, Wed | Physical | Earth | Life | 1 | 3 | 4 | 3 | 3 | 3 | 2 | 19 |
| Brookfield | 8/19, Fri | 11/17, Thur | 3/2, Thur | 6/5, Mon | Earth | Life | Physical | 1 | 5 | 5 | 3 | 3 | 3 | 3 | 23 |
| Burckhalter | 8/19, Fri | 11/17, Thur | 3/2, Thur | 6/1, Thur | Earth | Life | Physical | 1 | 2 | 3 | 2 | 2 | 1 | 2 | 13 |
| Carl Munck | 8/15, Mon | 11/18, Fri | 3/3, Fri | 6/2, Fri | Life | Physical | Earth | 1 | 2 | 2 | 1 | 2 | 1 | 2 | 11 |
| Chabot | 8/25, Thu | 11/28, Mon | 3/6, Mon | 5/30, Tue | Life | Physical | Earth | 0 | 2 | 5 | 5 | 3 | 4 | 4 | 23 |
| Cleveland | 8/17, Wed | 12/5, Mon | 3/13, Mon | 6/7, Wed | Life | Physical | Earth | 0 | 3 | 3 | 3 | 3 | 2 | 2 | 16 |
| Community United | 8/17, Wed | 12/2, Fri | 3/10, Fri | 5/31, Wed | Earth | Life | Physical | 1 | 3 | 3 | 3 | 3 | 3 | 2 | 18 |
| Crocker Highlands | 8/18, Thu | 12/1, Thur | 3/9, Thur | 6/6, Tue | Life | Physical | Earth | 0 | 3 | 3 | 3 | 4 | 3 | 3 | 19 |
| East Oakland Pride | 8/17, Wed | 11/18, Fri | 3/3, Fri | 5/31, Wed | Earth | Life | Physical | 0 | 3 | 3 | 3 | 4 | 3 | 3 | 19 |
| Emerson | 8/24, Wed | 11/16, Wed | 3/1, Wed | 5/30, Tue | Life | Physical | Earth | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 12 |
| EnCompass Academy | 8/16, Tue | 11/29, Tue | 3/7, Tue | 6/5, Mon | Earth | Life | Physical | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 13 |
| Esperanza | 8/24, Wed | 11/18, Fri | 3/3, Fri | 6/5, Mon | Physical | Earth | Life | 1 | 2 | 2 | 2 | 3 | 2 | 2 | 14 |
| Franklin | 8/15, Mon | 11/15, Tue | 2/28, Tue | 6/2, Fri | Life | Physical | Earth | 1 | 5 | 6 | 6 | 5 | 4 | 4 | 31 |
| Fruitvale | 8/23, Tue | 12/1, Thur | 3/9, Thur | 6/6, Tue | Physical | Earth | Life | 1 | 3 | 2 | 4 | 3 | 3 | 2 | 18 |
| Futures | 8/17, Wed | 12/2, Fri | 3/10, Fri | 5/31, Wed | Physical | Earth | Life | 0 | 3 | 3 | 3 | 4 | 3 | 2 | 18 |
| Garfield | 8/16, Tue | 12/5, Mon | 3/13, Mon | 6/7, Wed | Physical | Earth | Life | 1 | 4 | 5 | 4 | 4 | 3 | 3 | 24 |
| Glenview | 8/24, Wed | 11/30, Wed | 3/8, Wed | 6/8, Thur | Physical | Earth | Life | 1 | 3 | 3 | 3 | 3 | 3 | 2 | 18 |
| Global Family School | 8/25, Thu | 12/2, Fri | 3/10, Fri | 6/1, Thur | Physical | Earth | Life | 1 | 3 | 3 | 4 | 3 | 3 | 3 | 20 |
| Grass Valley | 8/19, Fri | 12/1, Thur | 3/9, Thur | 6/1, Thur | Earth | Life | Physical | 0 | 3 | 3 | 2 | 3 | 1 | 2 | 14 |
| Greenleaf | 8/17, Wed | 11/28, Mon | 3/6, Mon | 6/6, Tue | Earth | Life | Physical | 1 | 3 | 3 | 3 | 3 | 3 | 1 | 17 |
| Hillcrest | 8/18, Thu | 11/28, Mon | 3/6, Mon | 5/30, Tue | Life | Physical | Earth | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 12 |
| Hoover | 8/17, Wed | 11/29, Tue | 3/7, Tue | 6/1, Thur | Life | Physical | Earth | 1 | 3 | 2 | 2 | 2 | 1 | 2 | 13 |
| Horace Mann | 8/17, Wed | 11/30, Wed | 3/8, Wed | 6/2, Fri | Earth | Life | Physical | 0 | 4 | 3 | 3 | 2 | 2 | 3 | 17 |
| Howard | 8/19, Fri | 11/15, Tue | 2/28, Tue | 6/1, Thur | Earth | Life | Physical | 0 | 3 | 2 | 3 | 2 | 3 | 2 | 15 |
| International Community | 8/23, Tue | 11/29, Tue | 3/7, Tue | 6/6, Tue | Physical | Earth | Life | 0 | 2 | 2 | 2 | 2 | 3 | 2 | 13 |
| Joaquin Miller | 8/18, Thu | 12/5, Mon | 3/13, Mon | 6/8, Thur | Life | Physical | Earth | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 18 |
| Kaiser | 8/25, Thu | 11/16, Wed | 3/1, Wed | 5/30, Tue | Life | Physical | Earth | 0 | 2 | 2 | 2 | 2 | 3 | 0 | 11 |
| Korematsu Disc Acad | 8/24, Wed | 11/18, Fri | 3/3, Fri | 6/5, Mon | Physical | Earth | Life | 1 | 3 | 3 | 2 | 3 | 3 | 2 | 17 |
| La Escuelita | 8/16, Tue | 12/1, Thur | 3/9, Thur | 6/7, Wed | Earth | Life | Physical | 1 | 2 | 3 | 2 | 2 | 2 | 2 | 14 |
| Lafayette | 8/25, Thu | 11/30, Wed | 3/8, Wed | 6/6, Tue | Life | Physical | Earth | 0 | 1 | 1 | 3 | 2 | 2 | 1 | 10 |
| Laurel | 8/23, Tue | 11/15, Tue | 2/28, Tue | 6/8, Thur | Physical | Earth | Life | 1 | 3 | 4 | 3 | 4 | 3 | 3 | 21 |
| Lincoln | 8/15, Mon | 11/17, Thur | 3/2, Thur | 6/7, Wed | Life | Physical | Earth | 1 | 5 | 4 | 5 | 6 | 4 | 4 | 29 |
| Madison Park | 8/19, Fri | 11/30, Wed | 3/8, Wed | 6/5, Mon | Earth | Life | Physical | 1 | 3 | 2 | 2 | 2 | 2 | 2 | 14 |
| Manzanita Comm School | 8/25, Thu | 11/28, Mon | 3/6, Mon | 6/5, Mon | Physical | Earth | Life | 1 | 4 | 3 | 4 | 3 | 3 | 2 | 20 |
| Manzanita Seed | 8/25, Thu | 11/28, Mon | 3/6, Mon | 6/5, Mon | Physical | Earth | Life | 1 | 3 | 3 | 3 | 3 | 1 | 0 | 14 |
| Markham | 8/18, Thu | 11/16, Wed | 3/1, Wed | 6/7, Wed | Earth | Life | Physical | 1 | 3 | 3 | 3 | 4 | 1 | 2 | 17 |
| Martin Luther King Jr. | 8/16, Tue | 12/2, Fri | 3/10, Fri | 6/1, Thur | Life | Physical | Earth | 1 | 4 | 2 | 2 | 3 | 3 | 2 | 17 |
| Melrose | 8/25, Thu | 11/17, Thur | 3/2, Thur | 6/2, Fri | Physical | Earth | Life | 1 | 3 | 3 | 2 | 2 | 2 | 1 | 14 |
| Montclair | 8/15, Mon | 11/18, Fri | 3/3, Fri | 6/8, Thur | Life | Physical | Earth | 1 | 4 | 4 | 5 | 4 | 3 | 4 | 25 |
| New Highland Academy | 8/19, Fri | 12/5, Mon | 3/13, Mon | 5/31, Wed | Earth | Life | Physical | 1 | 3 | 3 | 3 | 2 | 2 | 2 | 16 |
| Parker | 8/18, Thu | 12/2, Fri | 3/10, Fri | 6/7, Wed | Earth | Life | Physical | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 11 |
| Peralta | 8/16, Tue | 12/1, Thur | 3/9, Thur | 5/30, Tue | Life | Physical | Earth | 0 | 2 | 2 | 3 | 2 | 2 | 2 | 13 |
| Piedmont Avenue | 8/17, Wed | 11/30, Wed | 3/8, Wed | 5/30, Tue | Life | Physical | Earth | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 19 |
| PLACE @ Prescott | 8/16, Tue | 11/16, Wed | 3/1, Wed | 6/1, Thur | Life | Physical | Earth | 1 | 1 | 2 | 2 | 2 | 3 | 2 | 13 |
| REACH Academy | 8/19, Fri | 11/15, Tue | 2/28, Tue | 5/31, Wed | Earth | Life | Physical | 1 | 3 | 3 | 2 | 3 | 2 | 2 | 16 |
| Redwood Heights | 8/24, Wed | 12/1, Thur | 3/9, Thur | 6/2, Fri | Physical | Earth | Life | 0 | 2 | 3 | 3 | 2 | 2 | 3 | 15 |
| RISE | 8/19, Fri | 12/5, Mon | 3/13, Mon | 5/31, Wed | Earth | Life | Physical | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 18 |
| Sankofa | 8/18, Thu | 11/28, Mon | 3/6, Mon | 6/5, Mon | Earth | Life | Physical | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 14 |
| Sequoia | 8/23, Tue | 11/30, Wed | 3/8, Wed | 6/8, Thur | Physical | Earth | Life | 1 | 3 | 3 | 4 | 3 | 2 | 2 | 18 |
| Think College Now | 8/23, Tue | 11/29, Tue | 3/7, Tue | 6/6, Tue | Physical | Earth | Life | 0 | 2 | 2 | 2 | 2 | 3 | 2 | 13 |
| Thornhill | 8/15, Mon | 12/2, Fri | 3/10, Fri | 6/8, Thur | Life | Physical | Earth | 1 | 2 | 3 | 3 | 3 | 2 | 2 | 16 |

**Appendix U—CAST Information**

OUSD Science

## State Science Test Updates
## 1/30/17

In Spring 2017, all California 5th graders, 8th graders, and either 10th, 11th, or 12th graders will participate in the pilot of the new California Science Test (CAST) and the California Alternative Assessment (CAA) of the Next Generation Science Standards (NGSS) This will replace the California Standards Test (CST).

| | |
|---|---|
| **Feb 6, 2017** | CAST & CAA Training Questions released |
| **Spring 2017** | CAST Pilot for grades 5, 8, and 10, 11, or 12 - *No scores released*<br>CAA Pilot (Year 1) - *No scores released* |
| **Spring 2018** | CAST Field Test for grades 5, 8, and 10, 11, or 12 - *No scores released*<br>CAA Pilot (Year 2) - *No scores released* |
| **Spring 2019** | CAST Operational for grades 5, 8, and 10, 11, or 12 - ***Student scores released***<br>CAA Field Test for grades 5, 8, and 10, 11, or 12 - *No scores released* |
| **Spring 2020** | CAST for grades 5, 8, and 10, 11, or 12 - ***Student scores released***<br>CAA operational - ***Student scores released*** |

OUSD's Transition Plan

In 2013 California adopted the Next Generation Science Standards (NGSS), a new set of research-based, K–12 science standards that set the expectations for what students should know and be able to do by stimulating students' interests in science and preparing them for college, careers, and community.

In 2013, the Oakland Unified School District began a multi-year plan to support teachers and students in the transition to the NGSS, including:

- Development of NGSS-aligned curriculum tools, (SIRA K-5 and Secondary Curriculum for 6-8, Bio9), and a scope and sequence for Chem 10 and Physics11.
- Training of Teacher Leaders through summer institutes, lesson study, and Teacher Leader Meetings.
- Implementation of NGSS-aligned benchmark assessments (SIRA End-of-Module Assessments for grades 3-5 and Secondary Benchmarks for grades 6-Bio9.)

Structure and Components of the CAST

The CAST is a computer-based assessment of K-12 standards, administered in grades 5, 8, and one high school grade, to be determined. The format and structure will be similar to that of the SBAC, using the CAASPP testing system. Items will assess the NGSS Performance Expectations and incorporate at least two of the three dimensions of NGSS (1) Science and Engineering Practices (2) Disciplinary Core Ideas,

and (3) Crosscutting Concepts. The CAST will include short answer and select response items, as well as computer adaptive performance tasks, which cover standards from a range of grades:

- 5th grade CAST will assess K-5th grade knowledge
- 8th grade CAST will assess 6th-8th grade knowledge
- High School CAST will assess 9-11th grade knowledge

Performance Tasks may integrate two of the four science domains (Life, Physical, Earth, and Engineering).

What Sites Can do Now

- **Ensure all students receive regular science instruction using district NGSS-aligned curriculum (SIRA with FOSS for K-5 and OUSD Secondary Science Curriculum 6-8, Bio9 and scope and sequences for Chem10 & Physics11 .)**
- **Ensure teachers attend 2016-17 science professional development on NGSS pedagogy and curriculum. Contact the Science Department for support and professional development dates.**
- **Utilize benchmark assessment data (SIRA End-of-Module Assessment 3-5 and OUSD Secondary Science Benchmark 6-Bio9) through collaborative scoring, analysis, and planning.**
- **Attend "Review Session for the CAST Training Questions" on Wed., Mar. 15th from 4-6pm at the Smart Center (900 High Street). Space is limited. Teachers must sign up on On-Track.**

CAST Administration

- The CAST pilot will be administered online only through the test delivery system using the same secure browser as the other CAASPP tests
- The pilot will take approximately one hour to administer, including the performance task

Data and Reporting

No scores from the 2017 CAST and CAA pilots or the 2018 field test will be made available to students, schools, or districts. Only participation rates will be reported. Student Score Reports will include:

- Purpose of the assessment
- Timeline for implementation

The first student scores will be released in 2019, which means that the current 3rd graders, 6th graders, and 8th graders will be assessed on the first operational CAST in two years.

**ASSISTANCE:**

- For more information or training on Next Generation Science Standards (NGSS), curriculum, or instruction, contact Elementary Science Coordinator Brenda.Tuohy@ousd.org or Secondary Science Coordinator Herberta.Zulueta@ousd.org.
- For more official district information regarding CAST and CAA training dates and updates, please see Knowledge Center - Assessment - State & Local.
- For state testing questions, please email testing@ousd.org.

## Appendix V—NGSS Pilot Cohort Overview & Application

**Elementary NGSS Cohort**
**2017-2018**
**Overview**

**Background**

Curriculum Adoption for the Next Generation Science Standards (NGSS) will occur across California in the 2018-2019 school year. The OUSD Science Department is preparing for the transition to full implementation of NGSS in grades K-5[1]. Seven NGSS curricula were piloted by teacher leaders in nine district across California, including Oakland, through the NGSS Early Implementation Initiative. The top three curricula are being reviewed by stakeholders in OUSD in Spring 2017.

We are looking for schools to pilot NGSS curricula in the 2017-2018 school year in advance of district-wide implementation in 2018-2019. Site Leadership Teams, Teaching and Learning, and external partners will work together to accelerate science learning outcomes and deepen instructional practices aligned to the new Next Generation Science Standards and Common Core State Standards.

**Timeline for NGSS Cohort**

| | |
|---|---|
| June 2, 2017 | Application for OUSD NGSS Cohort due |
| June 5-12 | Site Interviews (includes principals and teacher leaders) |
| June 16 | OUSD NGSS Cohort schools selected |
| Summer 2017 | NGSS Cohort schools receive online access to NGSS curriculum for summer planning |
| August 2017 | Materials delivered to NGSS Cohort schools |
| August 17 | NGSS Cohort kickoff event and training, 8:30 - 12:00 |
| August 22 | Teachers begin full of implementation of NGSS curriculum |
| October 13 | NGSS Cohort PD Day |
| November 2017 | First trimester survey completed by principal and all teachers |
| December 2017 | Possible board recommendation for curriculum adoption |
| January - June 2017 | Continue implementation and feedback to inform potential district-wide implementation in 2018-2019 |

[1] The Next Generation Science Standards include grades K-12.

## Appendix V—NGSS Pilot Cohort Overview & Application

OUSD Science

**Learning Outcomes**

- Improve the quantity and quality of science instruction in all classrooms.
- Develop school-wide shared understanding of NGSS and three-dimensional learning.
- Increase science teacher leadership capacity at each site.
- Develop science resources and model best practices for the District, with a focus on literacy integration and addressing issues of equity.

**Participant Benefits**

- Use of NGSS-aligned curriculum, fully alignment to Next Generation Science Standards, reflecting content of new state assessment, California Science Test (CAST)
- Access to new curriculum assessment materials (in lieu of SIRA Assessments)
- Support with science cycles of inquiry from Science Department
- Professional Development Support during August and October PD Days
- Leadership opportunities for teachers in district-wide implementation of NGSS

**Participant Commitments**

- Participate in NGSS Cohort kick-off event and training on August 17, 8:30-12:00
- Science taught 3-4 times per week at all grades (30 minutes/session in grades K-2, 45 minutes/session in grades 4-5)
- Full-day participation in October 13 Professional Development Day with NGSS Cohort (includes choice of workshops for participants and facilitated grade-level planning)
- PD cycle dedicated to science in the first trimester, co-planned with the Science Department. (May be a cycle addressing science and literacy, ELD, SEL)
- PLCs dedicated to science at least once a month, or for a total of 8 sessions per year
- Science Learning Walks with Site Leadership and Science Department 3/year
- 30 minutes dedicated time per trimester (staff meeting, extended contract) to complete feedback on the curriculum

**Selection Process**

Interested school teams should complete the NGSS Cohort application. A representative from the Science Department will conduct a short interview with site leadership and teacher leaders to ensure that there is broad interest and commitment to this field test cohort.

For more information contact Brenda Tuohy, Elementary Science Coordinator at brenda.tuohy@ousd.org or (510) 501-8970.

# Exhibit B

Delta Education Price Quotes
& Price List

PLEASE NOTE: YOU MUST INCLUDE A COPY OF THIS PROPOSAL WITH YOUR PURCHASE ORDER


Delta Education Featuring FOSS
...because children learn by doing.®

School Specialty Science
80 Northwest Blvd, Nashua, NH 03063
PO Box 3000, Nashua, NH 03061-3000
Phone: 800-338-5270 Fax: 800-282-9560

**Regional Sales Manager:** Richard Pacheco
602 750-0615


**Prepared On:** April 17, 2018

**Valid Through:** July 16, 2018

# DELTA EDUCATION PRICE QUOTE

**Prepared for:**
Brenda Tuohy Oakland USD

| | | | | |
|---|---|---|---|---|
| **Complete Kits** | $ 1,127,623.24 | | | |
| **Teacher Materials** | $ 291,744.85 | | | |
| **Professional Development** | $ - | | | |
| **Refill Kits** | $ - | | | |
| **Reading Components** | $ 87,884.30 | | | |
| **Living Materials** | $ - | | | |
| **Conversion / Upgrade Kits** | $ - | **Subtotal** | $ | 1,507,252.39 |
| **Miscellaneous** | $ - | **3% Shipping & Handling** | $ | 45,217.57 |
| **Online** | $ - | **Living Material Shipping** | $ | - |
| **Subtotal** | $ 1,507,252.39 | **8.0% *Est. Sales Tax** | $ | 120,580.19 |
| | | **Total*** | $ | 1,673,050.15 |

| Part Number | Item Description | Type | Unit Price | Qty | Extended Price | Comments |
|---|---|---|---|---|---|---|
| | **Kindergarten** | | | | | |
| 1487647 | KIT FOSS ANIMALS 2X2 NEXT GEN | Kit | $ 879.00 | 56 | $ 49,224.00 | |
| 1487669 | TEA TOOLKIT FOSS ANIMALS 2X2 NEXT GEN | TM | $ 225.95 | 83 | $ 18,753.85 | |
| 1487649 | KIT FOSS TREES+WEATHER NEXT GEN | Kit | $ 1,029.00 | 56 | $ 57,624.00 | |
| 1487671 | TEA TOOLKIT FOSS TREES+WEATHER NG | TM | $ 225.95 | 83 | $ 18,753.85 | |
| 1487648 | KIT FOSS MATERIALS+MOTION NG | Kit | $ 964.00 | 56 | $ 53,984.00 | |
| 1487670 | TEA TOOLKIT FOSS MATERIALS+MOTION NG | TM | $ 225.95 | 83 | $ 18,753.85 | |
| | **First Grade** | | | | | |
| 1487652 | KIT FOSS PLANTS + ANIMALS NEXT GEN | Kit | $ 919.00 | 56 | $ 51,464.00 | |
| 1487640 | SCI RES BBK FOSS PLNTS+ANMALS NEXT GEN | Reading | $ 34.95 | 78 | $ 2,726.10 | |
| 1487674 | TEA TOOLKIT FOSS PLNTS+ANIMLS NXT GN | TM | $ 225.95 | 78 | $ 17,624.10 | |
| 1487650 | KIT FOSS AIR+WEATHER NEXT GEN | Kit | $ 889.00 | 56 | $ 49,784.00 | |
| 1487638 | SCI RES BBK FOSS AIR + WEATHER NEXT GN | Reading | $ 34.95 | 78 | $ 2,726.10 | |
| 1487672 | TEA TOOLKIT FOSS AIR+WEATHER NEXT GEN | TM | $ 225.95 | 78 | $ 17,624.10 | |

PLEASE NOTE: YOU MUST INCLUDE A COPY OF THIS PROPOSAL WITH YOUR PURCHASE ORDER

| Part Number | Item Description | Type | Unit Price | Qty | Extended Price | Comments |
|---|---|---|---|---|---|---|
| 1487651 | KIT FOSS SOUND+LIGHT NEXT GEN | Kit | $ 1,069.00 | 56 | $ 59,864.00 | |
| 1487639 | SCI RES BBK FOSS SOUND+LIGHT NEXT GEN | Reading | $ 34.95 | 78 | $ 2,726.10 | |
| 1487673 | TEA TOOLKIT FOSS SOUND+LIGHT NEXT GN | TM | $ 225.95 | 78 | $ 17,624.10 | |
| | **Second Grade** | | | | | |
| 1487653 | KIT FOSS INSECTS + PLANTS NEXT GEN | Kit | $ 969.00 | 56 | $ 54,264.00 | |
| 1487641 | SCI RES BBK FOSS INSCTS+ PLNTS NEXT GEN | Reading | $ 34.95 | 80 | $ 2,796.00 | |
| 1487675 | TEA TOOLKIT FOSS INSCTS+PLNTS NEXT GN | TM | $ 225.95 | 80 | $ 18,076.00 | |
| 1509827 | KIT FOSS PEBS, SAND, AND SILT NEXT GEN | Kit | $ 1,034.00 | 56 | $ 57,904.00 | |
| 1487642 | SCI RES BBK FOSS PBLS SND+SILT NEXT GEN | Reading | $ 34.95 | 80 | $ 2,796.00 | |
| 1487676 | TEA TOOLKIT FOSS PBLS SND+SILT NEXT GN | TM | $ 225.95 | 80 | $ 18,076.00 | |
| 1487655 | KIT FOSS SOLIDS + LIQUIDS NEXT GEN | Kit | $ 1,179.00 | 56 | $ 66,024.00 | |
| 1487643 | SCI RES BBK FOSS SOL+LIQUIDS NEXT GEN | Reading | $ 34.95 | 80 | $ 2,796.00 | |
| 1487677 | TEA TOOLKIT FOSS SOL+LIQ NEXT GEN | TM | $ 225.95 | 80 | $ 18,076.00 | |
| | **Third Grade** | | | | | |
| 1487658 | KIT FOSS STRUCTURES OF LIFE NEXT GEN | Kit | $ 1,204.00 | 56 | $ 67,424.00 | |
| 1487679 | TEA TOOLKIT FOSS STRCTRS OF LIFE NEXT GEN | TM | $ 233.00 | 76 | $ 17,708.00 | |
| 1487659 | KIT FOSS WATER + CLIMATE NEXT GEN | Kit | $ 1,219.00 | 56 | $ 68,264.00 | |
| 1568281 | KIT FOSS ADD SESSION WATER + CLIMATE NG | Kit | $ 253.99 | 76 | $ 19,303.24 | |
| 1487657 | KIT FOSS MOTION + MATTER NEXT GEN | Kit | $ 1,174.00 | 56 | $ 65,744.00 | |
| 1487613 | SRB FOSS MOTION+ MATTER NEXT GEN PK/16 | Reading | $ 169.00 | 152 | $ 25,688.00 | |
| 1487678 | TEA TOOLKIT FOSS MOTION + MATTER NEXT GEN | TM | $ 233.00 | 76 | $ 17,708.00 | |
| | **Fourth Grade** | | | | | |
| 1487661 | KIT FOSS ENVIRONMENTS NEXT GEN | Kit | $ 1,319.00 | 48 | $ 63,312.00 | |
| 1487682 | TEA TOOLKIT FOSS ENVIRONMENTS NG | TM | $ 233.00 | 66 | $ 15,378.00 | |
| 1487664 | KIT FOSS SOILS ROCKS+LANDFORMS NEXT GEN | Kit | $ 1,339.00 | 48 | $ 64,272.00 | |
| 1487684 | TEA TOOLKIT FOSS SOILS RCKS+LNDFRMS NG | TM | $ 233.00 | 66 | $ 15,378.00 | |
| 1487660 | KIT FOSS ENERGY NEXT GENERATION | Kit | $ 1,689.00 | 48 | $ 81,072.00 | |
| 1487681 | TEA TOOLKIT FOSS ENERGY NEXT GEN | TM | $ 233.00 | 66 | $ 15,378.00 | |
| | **Fifth Grade** | | | | | |
| 1487665 | KIT FOSS LIVING SYSTEMS NEXT GEN | Kit | $ 1,314.00 | 48 | $ 63,072.00 | |
| 1487685 | TEA TOOLKIT FOSS LIVING SYSTEMS NG | TM | $ 233.00 | 67 | $ 15,611.00 | |
| 1530365 | KIT FOSS EARTH AND SUN NEXT GEN | Kit | $ 1,389.00 | 48 | $ 66,672.00 | |
| 1487624 | SCI RES BK FOSS EARTH AND SUN NG 16PK | Reading | $ 169.00 | 135 | $ 22,815.00 | |
| 1487689 | TEA TOOLKIT FOSS EARTH AND SUN NG | TM | $ 233.00 | 67 | $ 15,611.00 | |
| 1487666 | KIT FOSS MIXTURES+SOLUTIONS NEXT GEN | Kit | $ 1,424.00 | 48 | $ 68,352.00 | |
| 1487621 | SCI RES BK FOSS MIX+SOLUTIONS NG 16PK | Reading | $ 169.00 | 135 | $ 22,815.00 | |
| 1487687 | TEA TOOLKIT FOSS MIXTURES+SOLUTIONS NG | TM | $ 233.00 | 67 | $ 15,611.00 | |

2018

# FOSS® Next Generation™

## Program Components and Pricing

### Modules and Courses for Grades K–8


Delta Education

School Specialty. Science

# **FOSS Next Generation** 2018 Program Components and Pricing

## Grade K

| Part Number | Description | Price |
|---|---|---|
| 5N-1561981 | Complete Grade-Level Kit* | $1,804.00 |
| 5N-1590326 | Small Class Grade Level Kit[t] | $1,529.00 |
| 5N-1511917 | *Grade-Level Science Resources* Book - Each | $19.00 |

### Materials and Motion

| Part Number | Description | Price |
|---|---|---|
| 5N-1487648 | Complete Kit - Print Edition[1] | $964.00 |
| 5N-1537039 | Complete Kit - Digital Edition[2] | $842.00 |
| 5N-1533746 | Refill Kit | $129.00 |
| 5N-1487695 | *Science Resources* Book - Each | $6.95 |
| 5N-1511922 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487627 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531685 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487636 | *Science Resources* Big Book | $34.95 |
| 5N-1524340 | *Science Resources* eBook - Class License | $159.00 |
| 5N-1533672 | Conversion Kit (From 2nd Ed. Wood & Paper) | $576.00 |
| 5N-1533682 | Conversion Kit (From 3rd Ed. Materials in Our World) | $338.00 |

### Trees and Weather

| Part Number | Description | Price |
|---|---|---|
| 5N-1487649 | Complete Kit - Print Edition[1] | $1,029.00 |
| 5N-1571458 | Complete Kit - Digital Edition[2] | $909.00 |
| 5N-1533362 | Refill Kit | $30.00 |
| 5N-1487696 | *Science Resources* Book - Each | $6.95 |
| 5N-1511923 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487628 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531686 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487637 | Science Resources Big Book | $34.95 |
| 5N-1524349 | Science Resources eBook - Class License | $159.00 |
| 5N-1533365 | Conversion Kit (From 2nd Ed. Trees) | $520.00 |
| 5N-1533380 | Conversion Kit (From 3rd Ed. Trees & Weather) | $338.00 |

### Animals Two by Two

| Part Number | Description | Price |
|---|---|---|
| 5N-1487647 | Complete Kit - Print Edition[1] | $879.00 |
| 5N-1535961 | Complete Kit - Digital Edition[2] | $799.00 |
| | No refill kit required | |
| 5N-1487694 | *Science Resources* Book - Each | $6.95 |
| 5N-1511924 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487626 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531687 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487635 | *Science Resources* Big Book | $34.95 |
| 5N-1524339 | *Science Resources* eBook - Class License | $159.00 |
| 5N-1527600 | Conversion Kit (From 2nd Ed. Animals Two x Two) | $554.00 |
| 5N-1527880 | Conversion Kit (From 3rd Ed. Animals Two x Two) | $338.00 |
| 5N-1459531 | Living Material Cards - Set of 5 | $152.20 |

**Order Online** **Order by Phone/Fax:** **Order by Email**

# **FOSS Next Generation** 2018 Program Components and Pricing

## Grade 1

| Part Number | Description | Price |
|---|---|---|
| 5N-1560870 | Complete Grade-Level Kit* | $2,174.00 |
| 5N-1590817 | Small Class Grade Level Kit[t] | $1,474.00 |
| 5N-1511918 | *Grade-Level Science Resources* Book - Each | $19.00 |

### Sound and Light

| Part Number | Description | Price |
|---|---|---|
| 5N-1487651 | Complete Kit - Print Edition[1] | $1,069.00 |
| 5N-1529031 | Complete Kit - Digital Edition[2] | $947.00 |
| | *No refill kit required* | |
| 5N-1487714 | *Science Resources* Book - Each | $6.95 |
| 5N-1511925 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487630 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531688 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487639 | *Science Resources* Big Book | $34.95 |
| 5N-1511913 | *Science Resources* eBook - Class License | $159.00 |
| | ***NEW*** *module for Next Generation - No conversion available* | |

### Air and Weather

| Part Number | Description | Price |
|---|---|---|
| 5N-1487650 | Complete Kit - Print Edition[1] | $889.00 |
| 5N-1528978 | Complete Kit - Digital Edition[2] | $767.00 |
| 5N-1512126 | Refill Kit | $78.00 |
| 5N-1487697 | *Science Resources* Book - Each | $6.95 |
| 5N-1511926 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487629 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531689 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487638 | *Science Resources* Big Book | $34.95 |
| 5N-1511914 | *Science Resources* eBook - Class License | $159.00 |
| 5N-1513826 | Conversion Kit (From 2nd Ed. Air & Weather) | $524.00 |
| 5N-1513839 | Conversion Kit (From 3rd Ed. Air & Weather) | $338.00 |

### Plants and Animals

| Part Number | Description | Price |
|---|---|---|
| 5N-1487652 | Complete Kit - Print Edition[1] | $919.00 |
| 5N-1528993 | Complete Kit - Digital Edition[2] | $792.00 |
| 5N-1512186 | Refill Kit | $84.00 |
| 5N-1487698 | *Science Resources* Book - Each | $6.95 |
| 5N-1511927 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487631 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531691 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487640 | *Science Resources* Big Book | $34.95 |
| 5N-1511915 | *Science Resources* eBook - Class License | $159.00 |
| 5N-1513842 | Conversion Kit (From 2nd Ed. Plants & Animals) | $604.00 |
| 5N-1513848 | Conversion Kit (From 3rd Ed. Plants & Animals) | $338.00 |
| 5N-270-4063 | Living Material Card - Pillbugs and Sowbugs | $54.95 |

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# **FOSS Next Generation** 2018 Program Components and Pricing

## Grade 2

| Part Number | Description | Price |
|---|---|---|
| 5N-1560870 | Complete Grade-Level Kit* | $2,174.00 |
| 5N-1591481 | Small Class Grade Level Kit† | $1,719.00 |
| 5N-1511919 | *Grade-Level Science Resources* Book - Each | $19.00 |

### Solids and Liquids

| Part Number | Description | Price |
|---|---|---|
| 5N-1487655 | Complete Kit - Print Edition[1] | $1,179.00 |
| 5N-1513086 | Complete Kit - Digital Edition[2] | $1,057.00 |
| 5N-1507166 | Refill Kit | $68.00 |
| 5N-1487701 | *Science Resources* Book - Each | $6.95 |
| 5N-1511928 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487634 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531697 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487643 | *Science Resources* Big Book | $34.95 |
| 5N-1504982 | *Science Resources* eBook - Class License | $159.00 |
| 5N-1512612 | Conversion Kit (From 2nd Ed. Solids & Liquids) | $734.00 |
| 5N-1512670 | Conversion Kit (From 3rd Ed. Solids & Liquids) | $338.00 |

### Pebbles, Sand, and Silt

| Part Number | Description | Price |
|---|---|---|
| 5N-1509827 | Complete Kit - Print Edition[1] | $1,034.00 |
| 5N-1513087 | Complete Kit - Digital Edition[2] | $912.00 |
| 5N-1509200 | Refill Kit | $38.00 |
| 5N-1487700 | *Science Resources* Book - Each | $6.95 |
| 5N-1511929 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487633 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531702 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487642 | *Science Resources* Big Book | $34.95 |
| 5N-1504989 | *Science Resources* eBook - Class License | $159.00 |
| 5N-1513061 | Conversion Kit (From 2nd Ed. Pebbles, Sand, Silt) | $644.00 |
| 5N-1513064 | Conversion Kit (From 3rd Ed. Pebbles, Sand, Silt) | $338.00 |

### Insects and Plants

| Part Number | Description | Price |
|---|---|---|
| 5N-1487653 | Complete Kit - Print Edition[1] | $969.00 |
| 5N-1513088 | Complete Kit - Digital Edition[2] | $847.00 |
| 5N-1508800 | Refill Kit | $99.00 |
| 5N-1487699 | *Science Resources* Book - Each | $6.95 |
| 5N-1511930 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487632 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531707 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487641 | *Science Resources* Big Book | $34.95 |
| 5N-1504993 | *Science Resources* eBook - Class License | $159.00 |
| 5N-1512817 | Conversion Kit (From 2nd Ed. Insects & Plants) | $579.00 |
| 5N-1512863 | Conversion Kit (From 3rd Ed. Insects & Plants) | $338.00 |
| 5N-1459532 | Living Material Cards - Set of 4 | $133.20 |

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# **FOSS Next Generation** 2018 Program Components and Pricing

## Grade 3

| Part Number | Description | Price |
|---|---|---|
| 5N-1508397 | Complete Grade-Level Kit* | $1,759.00 |
| 5N-1587911 | Small Class Grade Level Kit[t] | $1,414.00 |
| 5N-1494234 | *Grade-Level Science Resources* Book - Each | $28.00 |

### Motion and Matter

| Part Number | Description | Price |
|---|---|---|
| 5N-1487657 | Complete Kit - Print Edition[1] | $1,174.00 |
| 5N-1512560 | Complete Kit - Digital Edition[2] | $962.00 |
| 5N-1495403 | Refill Kit | $40.00 |
| 5N-1487702 | *Science Resources* Book - Each | $14.00 |
| 5N-1508691 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487613 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531639 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1491622 | *Science Resources* eBook - Class License | $179.00 |
| | ***NEW*** *module for Next Generation - No conversion available* | |

### Water and Climate

| Part Number | Description | Price |
|---|---|---|
| 5N-1487659 | Complete Kit - Print Edition[1] | $1,219.00 |
| 5N-1512585 | Complete Kit - Digital Edition[2] | $999.00 |
| 5N-1495419 | Refill Kit | $28.00 |
| 5N-1487705 | *Science Resources* Book - Each | $14.00 |
| 5N-1508692 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487615 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531643 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1491621 | *Science Resources* eBook - Class License | $179.00 |
| 5N-1512436 | Conversion Kit (From 2nd Ed. Water) | $584.00 |
| 5N-1512440 | Conversion Kit (From 3rd Ed. Water) | $338.00 |

### Structures of Life

| Part Number | Description | Price |
|---|---|---|
| 5N-1487658 | Complete Kit - Print Edition[1] | $1,204.00 |
| 5N-1512518 | Complete Kit - Digital Edition[2] | $992.00 |
| 5N-1495414 | Refill Kit | $45.00 |
| 5N-1487704 | *Science Resources* Book - Each | $14.00 |
| 5N-1508690 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487614 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531442 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1491619 | *Science Resources* eBook - Class License | $179.00 |
| 5N-1512349 | Conversion Kit (From 2nd Ed. Structures of Life) | $809.00 |
| 5N-1512354 | Conversion Kit (From 3rd Ed. Structures of Life) | $338.00 |
| 5N-270-4184 | Living Material Card - Crayfish and Elodea | $97.95 |

# **FOSS Next Generation** 2018 Program Components and Pricing

## Grade 4

| Part Number | Description | Price |
|---|---|---|
| 5N-1558961 | Complete Grade-Level Kit* | $2,659.00 |
| 5N-1589069 | Small Class Grade Level Kit† | $1,924.00 |
| 5N-1511920 | *Grade-Level Science Resources* Book - Each | $28.00 |

### Energy

| Part Number | Description | Price |
|---|---|---|
| 5N-1487660 | Complete Kit - Print Edition[1] | $1,689.00 |
| 5N-1529841 | Complete Kit - Digital Edition[2] | $1,482.00 |
| 5N-1521060 | Refill Kit | $39.00 |
| 5N-1487706 | *Science Resources* Book - Each | $14.00 |
| 5N-1511931 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487616 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531646 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1514675 | *Science Resources* eBook - Class License | $179.00 |
| 5N-1521396 | Conversion Kit (From 2nd Ed. Magnetism & Elec.) | $1,094.00 |
| 5N-1521397 | Conversion Kit (From 3rd Ed. Energy & Electro.) | $338.00 |

### Soils, Rocks, and Landforms

| Part Number | Description | Price |
|---|---|---|
| 5N-1487664 | Complete Kit - Print Edition[1] | $1,339.00 |
| 5N-1529843 | Complete Kit - Digital Edition[2] | $1,122.00 |
| 5N-1515871 | Refill Kit | $49.00 |
| 5N-1487709 | *Science Resources* Book - Each | $14.00 |
| 5N-1511932 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487619 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531647 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1514677 | *Science Resources* eBook - Class License | $179.00 |
| 5N-1516495 | Conversion Kit (From 2nd Ed. Earth Materials) | $969.00 |
| 5N-1516496 | Conversion Kit (From 3rd Ed. Soils, Rocks & Land.) | $338.00 |

### Environments

| Part Number | Description | Price |
|---|---|---|
| 5N-1487661 | Complete Kit - Print Edition[1] | $1,319.00 |
| 5N-1529842 | Complete Kit - Digital Edition[2] | $1,102.00 |
| 5N-1514856 | Refill Kit | $56.00 |
| 5N-1487707 | *Science Resources* Book - Each | $14.00 |
| 5N-1511934 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487617 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531648 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1514676 | *Science Resources* eBook - Class License | $179.00 |
| 5N-1515558 | Conversion Kit (From 2nd Ed. Environments) | $694.00 |
| 5N-1515741 | Conversion Kit (From 3rd Ed. Environments) | $338.00 |
| 5N-1459533 | Living Material Cards - Set of 6 | $126.05 |

# **FOSS Next Generation** 2018 Program Components and Pricing

## Grade 5

| Part Number | Description | Price |
|---|---|---|
| 5N-1557817 | Complete Grade-Level Kit* | $2,424.00 |
| 5N-1589826 | Small Class Grade Level Kit[t] | $1,824.00 |
| 5N-1511921 | *Grade-Level Science Resources* Book - Each | $28.00 |

### Mixtures and Solutions

| Part Number | Description | Price |
|---|---|---|
| 5N-1487666 | Complete Kit - Print Edition[1] | $1,424.00 |
| 5N-1537300 | Complete Kit - Digital Edition[2] | $1,217.00 |
| 5N-1526690 | Refill Kit | $192.00 |
| 5N-1487711 | *Science Resources* Book - Each | $14.00 |
| 5N-1511935 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487621 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531649 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1524501 | *Science Resources* eBook - Class License | $179.00 |
| 5N-1526983 | Conversion Kit (From 2nd Ed. Mixtures & Sol.) | $789.00 |
| 5N-1526987 | Conversion Kit (From 3rd Ed. Mixtures & Sol.) | $338.00 |

### Earth and Sun

| Part Number | Description | Price |
|---|---|---|
| 5N-1530365 | Complete Kit - Print Edition[1] | $1,389.00 |
| 5N-1537223 | Complete Kit - Digital Edition[2] | $1,182.00 |
| 5N-1530522 | Refill Kit | $33.00 |
| 5N-1487713 | *Science Resources* Book - Each | $14.00 |
| 5N-1511936 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487624 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531655 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1524502 | *Science Resources* eBook - Class License | $179.00 |
| 5N-1530533 | Conversion Kit (From 2nd Ed. Water Planet) | $984.00 |
| 5N-1530536 | Conversion Kit (From 3rd Ed. Weather on Earth) | $500.00 |

### Living Systems

| Part Number | Description | Price |
|---|---|---|
| 5N-1487665 | Complete Kit - Print Edition[1] | $1,314.00 |
| 5N-1537232 | Complete Kit - Digital Edition[2] | $1,099.00 |
| 5N-1531644 | Refill Kit | $132.00 |
| 5N-1487710 | *Science Resources* Book - Each | $14.00 |
| 5N-1511937 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487620 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531682 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1524500 | *Science Resources* eBook - Class License | $179.00 |
| 5N-1532068 | Conversion Kit (From 2nd Ed. Living Systems) | $954.00 |
| 5N-1532069 | Conversion Kit (From 3rd Ed. Living Systems) | $338.00 |
| 5N-1459534 | Living Material Cards - Set of 2 | $55.10 |

# **FOSS Next Generation** 2018 Program Components and Pricing

## Grade 6

### Weather and Water

| Part Number | Description | Price |
|---|---|---|
| 5N-1558459 | Complete Kit[3] | $1,429.00 |
| 5N-1582797 | Lite Kit[4] | $1,310.00 |
| 5N-1558494 | Refill Kit | $124.00 |
| 5N-1558515 | *Science Resources* Book - Each | $22.00 |
| 5N-1602395 | *Science Resources* Book - Each (Spanish) | $22.00 |
| 5N-1558508 | *Science Resources* Book - PK/16 | $339.00 |
| 5N-1586499 | *Science Resources* Book - PK/16 (Spanish) | $339.00 |
| 5N-1582802 | *Science Resources* eBook - Class License | $199.00 |
| 5N-1558470 | Conversion Kit (From 1st Ed. Weather & Water) | $999.00 |

### Diversity of Life

| Part Number | Description | Price |
|---|---|---|
| 5N-1558460 | Complete Kit[3] - 5 Class Uses | $2,079.00 |
| 5N-1558461 | Complete Kit - 1 Class Use | $1,599.00 |
| 5N-1574730 | Lite Kit[4] - 5 Class Uses | $1,679.00 |
| 5N-1574740 | Refill Kit | $269.00 |
| 5N-1558516 | *Science Resources* Book - Each | $22.00 |
| 5N-1602396 | *Science Resources* Book - Each (Spanish) | $22.00 |
| 5N-1558509 | *Science Resources* Book - PK/16 | $339.00 |
| 5N-1586500 | *Science Resources* Book - PK/16 (Spanish) | $339.00 |
| 5N-1574787 | *Science Resources* eBook - Class License | $199.00 |
| 5N-1558471 | Conversion Kit (From 1st Ed. Diversity of Life) | $974.00 |
| 5N-270-4388 | Living Material Cards - Set of 5 | $45.95 |
| 5N-270-4377 | Living Material Card - Hissing Cockroach - Each | $132.95 |

### Human Systems Interactions

| Part Number | Description | Price |
|---|---|---|
| 5N-1465619 | Complete Kit[3] | $789.00 |
| 5N-1553979 | Refill Kit | $34.00 |
| 5N-1465674 | *Science Resources* Book - Each | $14.00 |
| 5N-1602387 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1465664 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1586491 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1553961 | *Science Resources* eBook - Class License | $199.00 |
| | ***NEW*** *module for Next Generation - No conversion available* | |

# **FOSS Next Generation** 2018 Program Components and Pricing

## Grade 7

### Chemical Interactions

| Part Number | Description | Price |
|---|---|---|
| 5N-1558463 | Complete Kit[3] | $1,984.00 |
| 5N-1602473 | Lite Kit[4] | $1,569.00 |
| 5N-1547083 | Refill Kit | $145.00 |
| 5N-1558519 | *Science Resources* Book - Each | $22.00 |
| 5N-1602398 | *Science Resources* Book - Each (Spanish) | $22.00 |
| 5N-1558511 | *Science Resources* Book - PK/16 | $339.00 |
| 5N-1586502 | *Science Resources* Book - PK/16 (Spanish) | $339.00 |
| 5N-1602475 | *Science Resources* eBook - Class License | $199.00 |
| 5N-1558474 | Conversion Kit (From 1st Ed. Chemical Interactions) | $800.00 |

### Earth History

| Part Number | Description | Price |
|---|---|---|
| 5N-1558458 | Complete Kit[3] | $2,094.00 |
| 5N-1584912 | Lite Kit[4] | $1,894.00 |
| | *No refill kit required* | |
| 5N-1558514 | *Science Resources* Book - Each | $22.00 |
| 5N-1602394 | *Science Resources* Book - Each (Spanish) | $339.00 |
| 5N-1558507 | *Science Resources* Book - PK/8 | $339.00 |
| 5N-1586498 | *Science Resources* Book - PK/16 (Spanish) | $339.00 |
| 5N-1584917 | *Science Resources* eBook - Class License | $199.00 |
| 5N-1558469 | Conversion Kit (From 1st Ed. Earth History) | $1,014.00 |

### Populations and Ecosystems

| Part Number | Description | Price |
|---|---|---|
| 5N-1558462 | Complete Kit[3] | $1,699.00 |
| 5N-1598545 | Lite Kit[4] | $1,489.00 |
| 5N-1558497 | Refill Kit | $115.00 |
| 5N-1558518 | *Science Resources* Book - Each | $22.00 |
| 5N-1602397 | *Science Resources* Book - Each (Spanish) | $22.00 |
| 5N-1558510 | *Science Resources* Book - PK/16 | $339.00 |
| 5N-1586501 | *Science Resources* Book - PK/16 (Spanish) | $339.00 |
| 5N-1598555 | *Science Resources* eBook - Class License | $199.00 |
| 5N-1558472 | Conversion Kit (From 1st Ed. Populations & Eco.) | $909.00 |
| 5N-1450925 | Living Material Card – Redworms, PK/150 | $31.05 |
| 5N-270-4380 | Living Materials Card - Milkweed Bugs, PK/30 | $55.95 |
| 5N-270-4379 | Living Materials Card - Mini Eco, SET/6 | $197.95 |

# **FOSS Next Generation** 2018 Program Components and Pricing

## Grade 8

### Heredity and Adaptation

| Part Number | Description | Price |
|---|---|---|
| 5N-1465620 | Complete Kit[3] | $999.00 |
| 5N-1558488 | Refill Kit | $220.00 |
| 5N-1465675 | *Science Resources* Book - Each | $14.00 |
| 5N-1602388 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1465665 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1586492 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1557049 | *Science Resources* eBook - Class License | $199.00 |
| | ***NEW*** *module for Next Generation - No conversion available* | |

### Electromagnetic Force

| Part Number | Description | Price |
|---|---|---|
| 5N-1465615 | Complete Kit[3] | $1,599.00 |
| | *No refill kit required* | |
| 5N-1465670 | *Science Resources* Book - Each | $14.00 |
| 5N-1602390 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1465660 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1586494 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1577419 | *Science Resources* eBook - Class License | $199.00 |
| | ***NEW*** *module for Next Generation - No conversion available* | |

### Gravity and Kinetic Energy

| Part Number | Description | Price |
|---|---|---|
| 5N-1465618 | Complete Kit[3] | $849.00 |
| | *No refill kit required* | |
| 5N-1465673 | *Science Resources* Book - Each | $14.00 |
| 5N-1602391 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1465663 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1586495 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1581146 | *Science Resources* eBook - Class License | $199.00 |
| | ***NEW*** *module for Next Generation - No conversion available* | |

### Waves

| Part Number | Description | Price |
|---|---|---|
| 5N-1465617 | Complete Kit[3] | $1,099.00 |
| 5N-1566010 | Refill Kit | $44.00 |
| 5N-1465672 | *Science Resources* Book - Each | $14.00 |
| 5N-1602389 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1465662 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1586493 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1557050 | *Science Resources* eBook - Class License | $199.00 |
| | ***NEW*** *module for Next Generation - No conversion available* | |

# **FOSS Next Generation** 2018 Program Components and Pricing

## Grade 8

| Planetary Science | | |
|---|---|---|
| **Part Number** | **Description** | **Price** |
| 5N-1558457 | Complete Kit[3] | $1,739.00 |
| 5N-1594384 | Lite Kit[4] | $1,617.00 |
| | *No refill kit required* | |
| 5N-1558513 | *Science Resources* Book - Each | $22.00 |
| 5N-1602393 | *Science Resources* Book - Each (Spanish) | $22.00 |
| 5N-1558506 | *Science Resources* Book - PK/16 | $339.00 |
| 5N-1586497 | *Science Resources* Book - PK/16 (Spanish) | $339.00 |
| 5N-1594390 | *Science Resources* eBook - Class License | $199.00 |
| 5N-1558468 | Conversion Kit (From 1st Ed. Planetary Science) | $909.00 |

*Grade Level Kits include three print Teacher Toolkits (Investigations Guide, Teacher Resources, and Teacher copy of FOSS Science Resources), online access to all digital content (except student eBooks), and materials for three (3) class uses 8 groups each (up to 32 students per class) for all three modules at a grade level.
***Student books must be purchased separately.***

♦Small Class Grade Level Kits include everything in the Complete Grade Level Kit but for only four groups (up to 16 students)

[1] Print Edition kits include one print Teacher Toolkit (Investigations Guide, Teacher Resources, and Teacher copy of FOSS Science Resources), 32 print copies of FOSS Science Resources, online access to all digital content (except student eBooks), and materials for three (3) class uses 8 groups each (up to 32 students per class)

[2] Digital Edition kits include online access to all digital content, a class license for the FOSS Science Resources eBook, and materials for three (3) class uses 8 groups each (up to 32 students per class)

[3] Complete kits include one print Teacher Toolkit (Investigations Guide, Teacher Resources, and Teacher copy of FOSS Science Resources), 32 print copies of FOSS Science Resources, online access to all digital content (except student eBooks), and materials for five (5) class uses of 8 groups each (up to 32 students per class)

[4] Lite kits are designed for well stocked science labs that already own common items like beakers, graduated cylinders, etc. or items found in multiple FOSS Next Generation Middle School courses. *Ask your sales representative which version is right for your school.*

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- Ship to customer name, telephone number, and address with zip code.
- A contact name, telephone number, and email address so that we may contact you if we have a question concerning your order.
- Any special shipping instructions or delivery deadlines.

### PROGRAM PRESENTATIONS

A Delta Education Regional Manager can come to your school or district office to show you how FOSS meets your specific curriculum needs. You will have an opportunity to look through the Investigations Guide, work with the materials by doing an actual investigation, read the *FOSS Science Resources,* and discuss implementation and training.

### PURCHASE EVALUATION

Your Delta Education Regional Manager can send select sample materials for previewing. For districts considering adopting FOSS, the Regional Manager can arrange a pilot program with your district science coordinator.

### FOSSweb TECHNICAL SUPPORT

For assistance with account questions, trouble logging in, and access code issues:
Phone: 800-258-1302, 8:00 a.m. to 5:30 p.m. EST
techsupport.science@schoolspecialty.com

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Shipping and handling charges are 12% of the total order with a minimum charge of $5.00.

### LIVING MATERIALS

After ordering living materials, a pre-paid postcard (for each item) will be shipped so that you can schedule delivery of your items. Please allow 3–4 weeks lead-time from the time we receive your order. In the event of inclement weather, your shipment could be delayed to ensure quality product. Living materials can only be shipped in the contiguous 48 states. Please check our website for the most current USDA restrictions. An additional handling charge will apply to any order that includes living materials. NOTE: All shipments contain more organisms than you will need for your activities. If a few organisms are dead on arrival, be sure to count the remaining organisms to determine if you have enough for your activities before calling for replacement.

Additional Shipping Charges for Live Items

| | |
|---|---|
| 1–3 items | $12.50 |
| 4–5 items | $22.00 |
| 6 or more items | $30.00 |

To ensure the success of life science investigations, FOSS users are encouraged to purchase any required live organisms locally to minimize the impact of potentially lengthy transit time and adverse weather conditions. Delta Education offers redeemable living material coupons for convenience.

# Exhibit C

OUSD-Delta Education Agreement

| Board Office Use: **Legislative File Info.** | |
|---|---|
| File ID Number | 18-0276 |
| Introduction Date | 5/9/18 |
| Enactment Number | 18-0826 |
| Enactment Date | 5/9/18 er |

OAKLAND UNIFIED SCHOOL DISTRICT
Community Schools Thriving Students

# Purchase Agreement for
# FOSS Elementary Materials, Supplies and Equipment
# between
# Oakland Unified School District
# and
# Delta Education

# Purchase Agreement for FOSS Elementary Materials, Supplies and Equipment between Oakland Unified School District and Delta Education

This Agreement is made and effective May 9, 2018 together with the Exhibits attached hereto and incorporated herein which may be added hereto from time to time by mutual written agreement of the Parties (collectively, the "Agreement"), by and between Oakland Unified School District, a California public entity, having an office and place of business at 1000 Broadway, Oakland, CA 94607 ("District"), and Delta Education, having an office and place of business at 80 Northwest Boulevard, Nashua, NH 03063 ("Contractor") (hereinafter collectively referred to as "the Parties", or individually as a "Party").

WHEREAS, Contractor is in the business of, and has expertise in, providing Products and Services as hereinafter described; and

WHEREAS, District wishes to obtain through Contractor and Contractor wishes to provide to District such Products and Services.

NOW THEREFORE, in consideration of the mutual covenants and promises set forth herein, the Parties agree as follows:

**Article 1 - Definition of Terms**

The following terms, wherever used in any documents which form part of this Agreement, shall have the meanings indicated below unless the context otherwise requires. Additional definitions may be contained elsewhere in this Agreement.

A. "Affiliate" means any entity which controls, is controlled by or is under common control with one of the Parties to this Agreement. "Control" or "Controlled" means beneficial ownership (direct or indirect) of the subject entity.

B. "Commercially Reasonable" means taking all such steps and performing in such a manner as a well-managed company would undertake where it was acting in a determined, prudent and reasonable manner to achieve a particular desired result for its own benefit.

C. "Deliverables" means those products, reports, documentation, and schedules to be developed and provided by Contractor to District in regard to the Services provided by Contractor hereunder.

D. "Products" means collectively FOSS Elementary curriculum and/or education materials, whether in hard copy or electronic format.

E. "Services" means the services provided by Contractor under this Agreement; i.e. sourcing and fulfilling the Product and/or providing Deliverables identified in an Order.

F. "Site" means the facility or office or other location, as designated in this Agreement or the Order, for which the Product and/or Deliverable is to be delivered.

G. "Order" means the form of purchase order or other document used for the purpose of ordering Product and/or Deliverables pursuant to this Agreement. Order shall also include District's written or electronic form of purchase requisition.

**Article 2 - Rules of Interpretation**

A. The term "including" means "including, but not limited to" and shall be interpreted as broadly as possible.

B. All references to "days" shall be calendar days, not business days, unless otherwise explicitly stated.

C. The captions and titles to articles and paragraphs of this Agreement are only provided for convenience/reference and have no effect on the nature, extent, construction and meaning of this Agreement.

D. In the event of any inconsistency between the provisions of the following documents, (a) unless such inconsistency relates to modification to the Indemnification, Rights in Deliverables, Representations and Warranties, or Limitations of Liability Articles herein, in which case such modification must specifically state that it is amending this Agreement as so stated, (b) the inconsistency shall be resolved by giving precedence in the following order:

   1. The Order;
   2. Documents incorporated into the Order in the order in which they are listed;
   3. Amendments to this Agreement, if any;
   4. This Agreement; and
   5. Documents incorporated into this Agreement in the order in which they are listed.

This Agreement shall govern and supersede any preprinted terms and conditions stated on or attached to any Order, which are null and void with respect to this Agreement.

E. If copies of documents are referenced or incorporated in this Agreement, they shall be considered originals. Attachments, schedules, appendices and addenda shall be considered part of the documents in which they are referenced. Documents that are referenced shall have the same force and effect as if contained in their entirety.

F. Notwithstanding the general rules of construction, both District and Contractor acknowledge that both Parties were given an equal opportunity to negotiate the terms and conditions contained in this Agreement, and agree that the identity of the drafter of this Agreement is not relevant to any interpretation of the terms and conditions of this Agreement.

**Article 3 - Attachments**

The following documents are attached and are hereby incorporated into this Agreement by reference:

A. Exhibit B to the District's May 9, 2018 Board of Education Materials re Adoption of Curriculum (*i.e.,* Quote for Purchase of NextGen FOSS & NextGen FOSS Price List)

**Article 4 - Term of Agreement and Not to Exceed Amount**

This Agreement shall be effective from May 9, 2018 through June 30, 2020, unless otherwise mutually extended in writing by the Parties, or if terminated in accordance with this Agreement. Further, all purchases made by the District from Contractor under this Agreement (and related Orders) shall not exceed $1,793,050.15 during the term of the Agreement, including all fees and taxes. Contractor agrees and understands that any Orders that would be subject to this Agreement that are accepted and fulfilled by Contractor that cumulatively exceed the not to exceed amount of this Agreement are void as a matter of law and Contractor will not be entitled to any payment or remuneration whatsoever for accepting and fulfilling said Orders. Notwithstanding the foregoing, the District will make reasonable efforts to monitor their spend under this Agreement, and make reasonable efforts to not submit Orders, or related Orders, to the Contractor upon meeting the amount not to exceed.

**Article 5 - Scope of Agreement, Order**

A. This Agreement is not a commitment on the part of the District to purchase Product from Contractor. Product will be purchased on an "as ordered" basis through the execution of one or more Orders, directing Contractor to deliver the Product, if any, for the benefit of the District.

B. The Product and any Deliverables to be provided shall be determined in such Order, including all attachments thereto. Each Order that refers to this Agreement shall be deemed a separate agreement that incorporates the terms and conditions of this Agreement by reference.

C. Any Order issued hereunder shall, at a minimum, contain the following:
   1. The incorporation by reference of this Agreement;
   2. The location where Product will be delivered;
   3. A detailed description of the Product, including, but not limited to, SKU, Manufacturer's item number, and any applicable designation and/or specifications which will avoid confusion regarding the Product to be delivered;
   4. A detailed description of Deliverable(s) to be provided by Contractor;
   5. Price, including any applicable fees and sales tax, and payment terms;
   6. The scheduled delivery date;
   7. Contractor shall not be required to deliver any Product and/or Deliverable unless and until an Order has been provided to Contractor.

D. If notice of rejection of an Order is not received by District within two (2) business days from the date of its receipt by Contractor, then such Order shall be deemed to have been accepted by Contractor.

**Article 6 - Rights in Deliverables**

A. Unless otherwise specifically agreed to in an Order, any and all Deliverables created, developed, or prepared by Contractor, its employees or Subcontractors shall be deemed a "work for hire" for the sole benefit of and belonging exclusively to District. All other intellectual property rights and other proprietary rights in and to the

Services, and information, know-how and processes developed by Contractor, or anyone acting on Contractor's behalf, arising from the Services performed hereunder shall be the sole and exclusive property of Contractor and shall not be claimed to be owned by District or their employees.

B. To the extent any Deliverable is not deemed a "work for hire" by operation of law, Contractor hereby irrevocably assigns, transfers and conveys to District all of its right, title and interest in all Deliverables under the Order, including, but not limited to, all rights of patent, copyright, trade secret or other proprietary rights in such Deliverable.

C. Contractor shall provide to District all Commercially Reasonable assistance, execute such documents, and take all such other actions, which may be reasonably required to perfect the foregoing rights to the Deliverable.

D. Notwithstanding the foregoing, Contractor shall retain ownership rights to (1) all of its previously existing intellectual property, including any systems, derivatives, modifications and enhancements thereto, (2) Confidential Information of Contractor, and (3) any tools or scripting applications used, developed or created by Contractor or its third party licensors during the performance of this Agreement.

**Article 7 - Invoicing, Terms of Payment, Price and Tax**

All invoices shall be submitted to the remit-to address specified in an Order, submitted as specified in this Agreement, and shall reference the Order number.

Subject to reconciliation with the terms of this Agreement and the Order, including verification that the Product was delivered, and unless otherwise stated herein, the invoice shall be paid ("paid" being defined as "issuance of payment from District's Accounts Payable Department") net thirty (30) days after receipt of a valid invoice at the above referenced remit-to address.

The Parties hereby agree that the District may pay Contractor an initial installment payment of $1,000,000 no later than September 15, 2018, and may pay Contractor a second installment payment of the balance that remains of the total $1,793,050.15 (*i.e.,* the total less the initial $1,000,000 payment) no later than September 15, 2019 for the initial Order for Products that the District placed when it adopted the FOSS Elementary Curriculum.

A. Any invoice or portion thereof that is subject to a good faith dispute will not be paid; in such case, District will promptly notify Contractor of any rejected invoice or portion thereof, with reasons for such rejection. The rejected costs, adjusted to the extent as mutually agreed to, shall then be re-invoiced on a separate invoice and paid net fifteen (15) days thereafter.

Invoices shall call for payments in U.S. Dollars, and shall accurately reflect the amount(s) of the Price set forth in the Order.

*Price*

The price specified in the Order for the Product shall consist of cost, including all other fees and sales tax that apply to said cost.

*Tax*

At District's request, Contractor will, to a Commercially Reasonable extent, file any certificate or other document which may cause any tax to be avoided or reduced, and cooperate with District in contesting any such tax or in claiming, on District's behalf, refunds of any such taxes paid by or on behalf of District.

All other taxes, including, but not limited to a Party's operations, such as payroll or income taxes, federal, state, and local income taxes, franchise taxes, gross receipts taxes, federal, state, and local sales and use taxes, and property taxes shall be the responsibility of the Party that incurs the tax liability.

**Article 8 - Title, Risk of Loss, Returns**

A. Contractor shall transfer to District good and merchantable title to the Deliverables and Product, free from all liens, encumbrances and claims of others, upon delivery of the Deliverables and Product to and its receipt by District, at which time title and risk of loss shall vest fully in District, unless notice of rejection is provided to Contractor's authorized representative within fourteen (14) days after such delivery.

B. Returns

1. General

Subject to Sections 2, 3, 4, 5, and 6, below,

a. For a Product to be eligible for return it must be in Resale Condition (one hundred percent complete, including all original boxes, packing materials, manuals, blank warranty cards, and other accessories provided by Contractor).
b. Unless otherwise stated, shipping fees imposed by the Contractor shall be at District's cost.
c. If return is due to Contractor's error, and the return request is made by District within thirty (30) days of receipt of Product, then Contractor will accept the return at no cost whatsoever to District.
d. If District ordered the incorrect Product or has decided that it no longer wants the Product, then Contractor will accept the return from District if notice of such is provided to Contractor's authorized representative within fourteen (14) days after such delivery, and the Product is returned to Contractor within thirty (30) days of receipt of Product.

2. Non-Conforming Product
   a. If District determines, in its reasonable discretion, that any Product is not in conformance with the description in the Order (a "Non-Conforming Product"), then District may at its option, either:
      1) Request that Contractor promptly initiate an order to replace the Non-Conforming Product at no cost to District, in which case Contractor will order replacement(s) within one (1) business day of notice of nonconformance from District and District shall return the Product to Contractor, all at no cost to District; or
      2) Terminate the non-conforming portion of the applicable Order, in which case District shall return the Product to Contractor at no cost to District, and Contractor, upon receipt of the Product, shall promptly refund to District any payments made to Contractor therefor,

      provided that the request for such return was made within fourteen (14) days after such delivery.
3. Damage and/or Defects

   If the Product has concealed damage (i.e., there is no evident damage to external packaging) or is defective, Contractor will accept the return from District. Contractor will order a replacement unit within one business day of notice of damage or defect from District for prompt delivery to District, all at no cost to District.
4. Shipping Damage
   a. If a package containing Product purchased from Contractor arrives at District Order's ship-to address with external damage, District should refuse to accept delivery from the carrier. If District does accept delivery of such a package, District must:
      1) note the damage on the carrier's delivery record so that Contractor may file a claim;
      2) save, as is, the Product and the original box and packaging it arrived in; and
      3) notify Contractor in writing within five days of delivery acceptance to arrange for carrier's inspection and pickup of the damaged merchandise.
   b. If District does not comply with the above requirements, District will be deemed to have accepted the Product as if it had arrived undamaged, and Contractor's regular return policy, as described herein, will apply.

**Article 9 - Packaging, Labeling, and Shipping**

A. Products shipped to District's facilities shall be packaged in such a manner as to preclude all reasonably anticipated in-transit damage and in accordance with commercial standards. All shipments of Products will be clearly labeled with the shipping address stated on the order, the applicable Order number, recipient's name and if applicable, building and room number.
B. Contractor will deliver all Products FOB Destination to the ship to address designated in the Order, freight pre-paid and added, ground transportation.

**Article 10 - Contractual Relationships, Relations**

A. District/Contractor Relationship: It is the intent of the Parties that the relationship of District and Contractor be that of the "District" and "independent contractor", respectively. As an independent contractor, Contractor shall not act as or be an agent or employee of District in performing the Services, and shall determine the means and methods for satisfactorily providing the Services.

B. Any provision herein referring to Contractor's subcontractors shall not create privity of contract between District and such parties.

**Article 11 - Indemnification**

A. Each Party (the "Indemnifying Party") shall, to the extent permitted by law, indemnify, defend and hold harmless the other Party and its respective employees, officers, directors, agents and representatives (the "Indemnified Party") from and against any and all third party liabilities, actual or alleged claims, actions, losses and damages (collectively, a "Claim") to the extent caused by or arising out of the negligence, breach of contract, willful misconduct, or violation of law of the Indemnifying Party or any agent of the Indemnifying Party in the course of its performance under this Agreement, including but not limited to personal injury, death, damage to property (tangible or intangible), infringement of intellectual property rights, and/or injury, sickness, or disease to persons (including death), infringement of civil rights or other tortious acts settlements, judgments, court costs, reasonable attorneys' fees, fines, penalties and other litigation expenses. This indemnity shall apply to all Claims against the Indemnified Party made or threatened by, or in the name of or on behalf of the Indemnifying Party's employees which arise in the course of their employment. The Indemnifying Party hereby waives any defense it may otherwise have under applicable workers compensation laws.

B. The Indemnified Party shall provide timely written notice to the Indemnifying Party of any claim, loss, suit, demand or lien under this Article which it becomes aware of; but the Indemnified Party's failure to promptly notify the Indemnifying Party will only affect Indemnifying Party's obligations hereunder to the extent that such failure prejudices Indemnifying Party's ability to defend the Claim.

C. The Indemnifying Party shall assume exclusive control of the Claim, and the Indemnified Party shall provide reasonable assistance in the defense of the Claim at the Indemnifying Party's expense. The Indemnifying Party may: (a) use counsel of Indemnifying Party's own choosing to defend against the Claim and (b) settle the Claim as the Indemnifying Party deems appropriate, provided that the Indemnifying Party obtains the Indemnified Party's prior written consent, which shall not be unreasonably withheld, before entering into any settlement which will impact the Indemnified Party's rights under this Agreement. The Indemnified Party may also, at its own expense, assume control of the defense and settlement of the Claim at any time.

D. If the Indemnified Party is obligated to respond to a third party subpoena or other compulsory legal order or process as a result of a Claim, the Indemnifying Party will reimburse the Indemnified Party for reasonable attorneys' fees, as well as time and materials costs incurred in responding to such third party subpoena or other compulsory legal order or process.

**Article 12 - Limitation of Liability**

A. NEITHER PARTY WILL BE LIABLE FOR ANY SPECIAL, PUNITIVE, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF OR DAMAGE TO DATA, LOSS OF ANTICIPATED REVENUE OR PROFITS, WORK STOPPAGE OR IMPAIRMENT OF OTHER ASSETS, WHETHER OR NOT FORESEEABLE AND WHETHER OR NOT A PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

B. EXCEPT IN THE CASE OF BREACH OF EACH PARTY'S LIABILITY FOR PERSONAL INJURY/PROPERTY DAMAGE UNDER ARTICLE ENTITLED, "INDEMNIFICATION", EITHER PARTY'S TOTAL CUMULATIVE LIABILITY TO THE OTHER IN CONNECTION WITH THIS AGREEMENT, WHETHER IN CONTRACT, TORT OR OTHER THEORY, WILL NOT EXCEED THE TOTAL AMOUNT OF FEES ACTUALLY PAID OR PAYABLE BY DISTRICT TO CONTRACTOR UNDER THIS AGREEMENT FOR THE YEAR PREVIOUS TO THE INCIDENT WHICH GAVE CAUSE FOR SUCH LIABILITY, OR THE CURRENT YEAR (IF NO SUCH DATA/RELATIONSHIP REGARDING THE PREVIOUS YEAR IS AVAILABLE).

**Article 13 - Representations and Warranties**

A. Contractor hereby represents and warrants to District that for the term of this Agreement:

1. Contractor shall perform the Services in a timely manner and with a high degree of professional skill and care using customarily accepted good and sound professional practices and procedures in the industry.
2. Contractor will maintain all necessary local, state, and federal licenses and certifications that may be required in order to legally deliver the Product and Deliverables described in the Order(s). Contractor understands and acknowledges that Contractor is wholly responsible for ensuring compliance with all

federal, state, and local laws associated with the delivery of all Services associated with this Agreement and associated Order(s).

3. Contractor has all rights, approvals, and/or authorizations necessary to perform the Services hereunder, and provide the Product and/or Deliverables.
4. Contractor is authorized to execute this Agreement, is qualified to perform the Services, and has good title to the materials, supplies and equipment constituting the Services, free from all liens, encumbrances and claims of others.
5. The Services and any Deliverables will not contain any computer instructions, circuitry or other technological means whose purpose is to disrupt, damage or interfere with District's use of the Services, Deliverables or its computer and telecommunications facilities.

B. Remedy

If a defect occurs or appears in the Deliverables or Services provided hereunder, it shall be presumed that Contractor failed to meet such standards, and Contractor shall promptly and at its own expense, correct or re-perform any such Services which fail to meet such standards within a reasonable time frame acceptable to District at no additional cost.

C. Warranty of Delivery

1. If the District orders Products by the 15th day of May in each calendar year, Contractor guarantees delivery of said Products prior to the opening of school in that same calendar year in which the textbooks and instructional materials are to be used.
2. For all other Orders for Products placed by the District, Contractor guarantees delivery of said Products within thirty (30) days of the placement of said Order.

D. Warranty of Product

1. The Products shall be covered by Contractor's standard warranty terms and provisions, provided, however, that the warranty coverage shall be no less than the following: (i) The warranty period set forth therein shall run for one (1) year following shipment of the Product to the District and (ii) Contractor warrants the Products against defects in material and workmanship under normal use.
2. District has made and will make its own selection of the Products to be ordered hereunder based on its own evaluation of the character of such Product and its use needs.
3. Contractor shall forward to District all associated documentation provided or made available relating to the Products at no additional cost, such as operator/user manuals, training materials, guides, and functional/technical specifications, whether in writing, electronic means or otherwise, (collectively "Documentation").

**Article 14 - Publicity, Marks**

A. During or after the term of this Agreement, the Contractor shall not release any information (other than to its subcontractors on a need to know basis for purposes of performance under this Agreement and subject to the terms of this Agreement), including news releases, publicity, promotional, marketing, or other materials, media, or activities, any name, trade name, trademark, service mark, logo, or any other designation relating to the District, its Affiliates, or this Agreement, without the District's prior written approval and compliance with any terms and conditions related to such use which the owner of the mark provides to the other Party.

B. Except as specifically set out in this Agreement, nothing in this Agreement shall grant, suggest or imply any authority for one Party to use the name, trademarks, service marks or trade names of the other for any purpose whatsoever.

**Article 15 - Insurance**

Contractor represents that it now carries, and agrees it will continue during the term of the Order to carry, as a minimum, insurance as listed below:

| Type of Coverage | Limits of Liability |
|---|---|
| 1. Worker's Compensation | $1,000,000 per Accident or Disease |
| 2. Employers' Liability | $1,000,000 Bodily Injury by Accident or Disease, per person |
| 3. Commercial General Liability including: | $1,000,000 Each Occurrence |

| Type of Coverage | Limits of Liability |
|---|---|
| • Damage to Rented Premises | $1,000,000 Each Occurrence |
| • Medical Expenses | $10,000 (any one person) |
| • Personal & ADV Injury, including sexual abuse and molestation | $1,000,000 |
| • General Aggregate | $2,000,000 |
| • Products/Completed Operations Aggregate | $2,000,000 |
| 4. Automobile Liability Insurance (owned, hired, and non owned) | $1,000,000 Combined Single Limit (each accident) |
| 5. Excess/Umbrella Liability | $15,000,000 Each Occurrence<br>$15,000,000 Aggregate |
| 6. Commercial Crime Policy | $1,000,000 / $100,000 deductible |
| 7. Errors & Omissions | $5,000,000 Each Occurrence<br>$5,000,000 Aggregate |
| 8. Cyber Liability | $1,000,000 Aggregate |

B. Prior to the start of Services, at each subsequent policy renewal date, and each time a change is made in any insurance policy or insurance carrier, Contractor shall furnish one (1) insurance certificate to District for the foregoing coverages as proof of such insurance. The certificate shall include:

1. Name of insurance carrier, policy number and expiration date;
2. This Agreement number, or statement of blanket applicability;
3. The coverages required, whether on the basis of claims made or per occurrence, and the limits on each, including the amount of deductibles or self-insured retentions (which shall be for the account of Contractor);
4. A statement that District and their respective officers, directors, employees and agents are additional insureds on Commercial General Liability, including an Additional Insured endorsement naming the District as an additional insured; and
5. All policies required by this Agreement shall be written by insurance carriers licensed to do business in the state of California.

C. The coverage may not be canceled, altered or permitted to lapse or expire during the term of this Agreement.

**Article 16 - Laws, Regulations and Permits**

A. Contractor shall at all times comply with all applicable federal, state and local laws, ordinances, statutes, rules and regulations, including but not limited to, those relating to wages, taxes, hours, environmental, fair employment practices, equal opportunity, antidiscrimination, safety, fire prevention and working conditions.

**Article 17 - Assignment and Subcontracting**

A. Neither Party may assign, subcontract, or transfer the Agreement or any part thereof without the other Party's prior written consent, and any such assignment or transfer without such consent shall be null and void.

B. Notwithstanding District's written consent to a proposed subcontract, Contractor shall remain responsible for all subcontracted Services and the payment therefor, and Contractor shall be liable to District for the acts and omissions of any subcontracted entity, their agents, representatives and persons directly or indirectly employed by them.

C. This Agreement shall be binding upon and inure to the benefit of the Parties and their respective legal representatives, heirs, successors and assigns permitted by this Agreement.

**Article 18 - Authorized Representatives and Notices**

A. Contract Representatives, Notices

1. Any notice or demand required under the terms of this Agreement that must be made in writing shall be sent by facsimile, certified or registered mail, delivered by hand via a nationally recognized overnight carrier, or sent by Email with receipt confirmation addressed to the "Contract Representatives" named below. The effective date of any such notice shall be (1) upon evidence of successful facsimile or Email transmission, or (2) five days following the date mailed for certified or registered letters and two days following the date mailed for overnight letters, or (3) when delivered, if in person or by overnight carrier.

2. The Contract Representatives are designated as follows:

| For District | For Contractor |
|---|---|
| Brenda Tuohy, Elementary Science Coordinator<br>Oakland Unified School District<br>1000 Broadway, Suite 600<br>Oakland, CA 94607<br>Email: brenda.tuohy@ousd.org | W. Kent Walker<br>Delta Education LLC<br>80 Northwest Boulevard<br>Nashua, NH 03063<br>kent.walker@schoolspecialty.com |

3. The Contractor's Contract Representative shall have the authority to make binding and enforceable decisions on behalf of their employer, and to accept service of commercial notices and other contractual correspondence which a Party desires to give or is required to be given under this Agreement. The District's Contract Representative shall have the authority to make binding and enforceable decisions on behalf of the District, and to accept service of commercial notices and other contractual correspondence which a Party desires to give or is required to be given under this Agreement, with the exception of amendments or modifications to this Agreement, which excepted amendments or modifications require the formal approval or ratification of the District's Board of Education. Either Party may change its Contract Representative designee by giving the other Party prior written notice thereof.

B. Account Representatives

1. Before commencing the Services, the Parties shall designate authorized Account Representatives to represent and act for them regarding the administration of the Services and all other aspects of the supply of Product and/or Deliverables. Such Account Representative shall have the authority to make binding and enforceable decisions regarding the Services to be performed.
2. The Account Representative is not authorized to terminate, suspend, change or waive any provision of, or amend this Agreement.
3. The Account Representatives are designated as follows:

| For District | For Contractor |
|---|---|
| Brenda Tuohy, Elementary Science Coordinator<br>Oakland Unified School District<br>1000 Broadway, Suite 600<br>Oakland, CA 94607<br>Email: brenda.tuohy@ousd.org | Richard Pacheco<br>Delta Education LLC<br>14614 South 20th Place<br>Phoenix, AZ 85048<br>richard.pacheco@schoolspecialty.com |

**Article 19 - Force Majeure**

A. Neither Party to this Agreement shall be liable to the other to the extent any failure or delay in performing its obligations hereunder, or for any loss or damage resulting therefrom, is due to: (1) acts of God or public enemy, acts of government, riots, terrorism, fires, floods, strikes, lock outs, epidemics, act or failure to act by the other Party, or unusually severe weather affecting District, Contractor or its subcontractors, or (2) causes beyond their reasonable control and which are not foreseeable (each a "Force Majeure Event"). In the event of any such Force Majeure Event, the date of delivery or performance shall be extended for a period equal to the time lost by reason of the delay.

B. The Party experiencing the delay shall be prompt in restoring normal conditions, establishing new schedules and resuming operations as soon as the event causing the failure or delay has ceased. Contractor shall notify District promptly of any such delay and shall specify the effect on the Product delivery as soon as practical.

C. Notwithstanding any of the foregoing to the contrary, neither Party shall be excused from those obligations not directly affected by a Force Majeure Event, and if the Force Majeure Event is caused by a Party's failure to comply with any of its obligations under this Agreement or by such Party's negligence or omission, there shall be no relief for such Party from any of its obligations under this Agreement. Notwithstanding anything to the contrary in this Agreement, if the delay or interruption of performance resulting from a Force Majeure Event exceeds thirty days, then the Party receiving the delayed performance may terminate this Agreement upon ten business days' notice to the other Party.

**Article 20 - Termination**

A. Termination for Convenience
   1. Either Party may terminate this Agreement, without cause and for its own convenience, by giving the other Party a written "Notice of Termination for Convenience," specifying the extent to which this Agreement is terminated and the date upon which such termination becomes effective. Such notice shall provide a minimum of thirty (30) days' notification before the termination is effective.
   2. After receiving such a "Notice of Termination for Convenience" and except as otherwise directed by District's Contract Representative, Contractor shall:
      a. stop the Services on the date and to the extent specified in the termination notice; and
      b. issue/place no further purchase orders for Products, except as may be necessary for completing such portions of the Orders which have not been terminated.
   3. District's payment obligations shall be limited to the amounts owed up to the termination date.

B. Termination for Default
   1. Either Party may terminate this Agreement in whole or in part by giving the defaulting Party a written "Notice of Termination for Default", specifying one or more of the following causes or circumstances:
      a. if a Party becomes insolvent or makes a general assignment for the benefit of creditors; or
      b. if a petition under the Bankruptcy Code is filed by or against a Party; or
      c. if material and adverse developments affecting a Party's business come to the attention of the non defaulting Party, and it seeks but fails to receive from the Party in default reasonable assurances, in writing, as to its ability and intention to perform and complete its obligations under this Agreement; or
      d. if a Party becomes involved in legal proceedings that in the non-defaulting Party's reasonable opinion materially interferes or will materially interfere with the defaulting Party's obligations under this Agreement; or
      e. if the defaulting Party fails to perform any of the other material provisions of this Agreement and the Party in default does not cure such failure or substantially commence cure of such failure within ten (10) business days (or such longer period as the non-defaulting Party may authorize in writing) after delivery of notice from the non-defaulting Party specifying such failure.

C. An Order may be cancelled as follows:
   1. District shall have the right to cancel or postpone, in whole or in part, any Order, without penalty, provided that notice of such cancellation or postponement is received by Contractor prior to shipment of the ordered Products; and
   2. If District cancels an Order following shipment of the Products but prior to delivery, District shall pay all freight and handling charges for shipment and return shipment of such Products to Contractor. All returns shall be made in accordance with Contractor Return Policy.

D. Termination of this Agreement shall not affect the obligations of District or Contractor under any existing Order issued under this Agreement, and such Order shall continue in effect as though this Agreement had not been terminated, and was still in effect with respect to such Order.

**Article 21 - No Waiver**

Any failure by either Party to insist upon observance or performance by the other of the provisions of this Agreement shall not be deemed a "course of dealing", waiver of any such provision, or a waiver of the right of the Parties to enforce any and all provisions in the future. No waiver shall be binding unless it is in writing and signed by the Parties' Contract Representative. Any written waiver shall apply only to the specific default or to the instance specified, and a waiver of any default shall not be deemed a waiver of any other default, whether or not similar to the default waived.

**Article 22 - Severance**

Should any term or condition of this Agreement be declared unenforceable in law for whatever reason, all other terms and conditions shall survive and nevertheless remain valid, legal and enforceable, and the unenforceable provision will be severed from this Agreement.

**Article 23 - Claims/Disputes/Governing Laws**

A. This Agreement, any Order thereunder, and any claims or disputes arising out of or relating thereto shall be governed by the laws of California, without regard to: (1) conflict of law principles; (2) the United Nations Convention on Contracts for the International Sale of Goods; and, (3) the Uniform Computer Information Transactions Act ("UCITA"). The Alameda County Superior Court shall have jurisdiction over any litigation initiated to enforce or interpret this Agreement.

B. Any claim or dispute which either Party may have against the other, arising out of this Agreement shall be presented by the claimant in writing to the other Party not later than thirty (30) days after circumstances which gave rise to the claim or dispute have taken place or become known to the claimant, whichever is later. The claim or dispute shall contain a concise statement of the question or dispute, together with relevant facts and data to fully support the claim.

C. In the event of any such claim or dispute, the Parties' Contract Representatives shall use their best efforts to negotiate a resolution. Upon the failure of such negotiations, such claim or dispute shall be further negotiated between more senior officials from each of the Parties who shall have decision-making authority (but not direct responsibility for the administration of this Agreement); provided however, that nothing therein contained shall prohibit either Party from terminating its participation in the dispute during any stage of the process.

D. If any claim or dispute arising hereunder is not resolved through such negotiations within thirty days following written presentment pursuant to paragraph B., above, either Party may, upon giving the other Party at least ten days' prior written notice, initiate litigation submitting such claims or disputes for decision by a court of competent jurisdiction within the venue stated in paragraph A., above, in accordance with the rules of that court and laws of that jurisdiction. Either Party may, at its option and at any time during the dispute resolution process, seek injunctive relief (including, but not limited to preliminary injunctive relief).

E. The Parties acknowledge that the remedies available to them under this Agreement, or that would otherwise be available at law, will be inadequate in case of any default or threatened default in the performance of the Parties' respective obligations under this Article and that such obligations shall be enforceable by a decree for the specific performance or by an injunction against any actual or threatened violation thereof.

Except as expressly stated in this Agreement, the Parties' rights and remedies hereunder shall be cumulative and not exclusive of each other, shall be in addition to all other rights and remedies at law or in equity, and may be pursued separately or concurrently as the aggrieved Party determines.

F. The prevailing Party in any litigation arising out of or relating to this Agreement shall be entitled to recover its expenses, costs of litigation (including, without limitation, clerk, paralegal, and expert witness costs), and reasonable attorneys' fees from the losing Party, whether or not otherwise specifically awardable under any law or court rule.

**Article 24 - Notice of Changes to Documents**

The Parties represent that neither Party has made any change to any documents constituting the Agreement that have not been brought to the attention of the other Party via a redlined document, e-mail correspondence nor other means reasonably calculated to put the other Party on notice of the change. Any such change shall render this Agreement terminable for breach by the other Party, at that Party's discretion, even if that Party has executed the Agreement.

**Article 25 - Survival of Obligations**

The obligations of the Parties in the following Articles herein shall survive termination, cancellation or expiration of this Agreement:

Article 6 - Rights in Deliverables
Article 11 - Indemnification
Article 12 - Limitation of Liability
Article 13 - Representations and Warranties
Article 23 - Claims/Disputes/Governing Laws

**Article 26 - Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion and Regarding Compliance with California Law**

Contractor certifies to the best of its knowledge and belief, that it and its principals are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency according to Federal Acquisition Regulation Subpart 9.4, and by signing this

contract, certifies that this vendor does not appear on the Excluded Parties List (https://www.sam.gov/).

Contractor also certifies that it has complied and its Products comply with California law, including but not limited to the laws governing school districts' consideration and adoption of curriculum and consideration and approval of contracts.

**Article 27 - Execution/Counterparts/Electronic Transmission**

This Agreement (and any Order) may be executed in two or more identical counterparts, each of which shall be deemed to be an original and all of which taken together will be deemed to constitute one and the same document when a duly authorized representative of each Party has signed a counterpart. The Parties may sign and deliver this Agreement (and any Order) by facsimile or other electronic transmission. Each Party acknowledges that the delivery hereof by facsimile or other electronic transmission will have the same force and effect as delivery of original signatures.

**Article 28 - Signature Authority**

Each party has the full power and authority to enter into and perform this Agreement, and the person signing this Agreement on behalf of each Party has been given the proper authority and empowered to enter into this Agreement.

**Article 29 - Contract Contingent on Governing Board Approval**

The District shall not be bound by the terms of this Agreement until it has been formally approved by the District's Governing Board, and no payment shall be owed or made to Contractor absent that formal approval. This Agreement shall be deemed approved when it has been signed by the Board of Education, and/or the Superintendent as its designee.

**Article 30 - W-9 Form**

If Contractor is doing business with the District for the first time, complete and return with the signed Agreement the W-9 form.

**Article 31 - Contract Publicly Posted**

This contract, its contents, and all incorporated documents (including Orders) are public documents and will be made available by the District to the public online via the Internet.

**Article 32 - Entire Agreement**

This Agreement, including all Orders issued by District and accepted by Contractor pursuant to this Agreement, shall constitute the entire agreement between the Parties with respect to the subject matter of this Agreement. This Agreement and any Order shall not be modified or rescinded, except by a writing signed by Contractor and District. The provisions of this Agreement supersede all contemporaneous and prior oral and written communications, understandings and agreements of the Parties with respect to the subject matter of this Agreement.

## Authorization

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives, effective as of the date first above written.

**OAKLAND UNIFIED SCHOOL DISTRICT**

Aimee Eng — 5/10/18
Aimee Eng, Board President — Date

Kyla Johnson-Trammell — 5/10/18
Kyla Johnson-Trammell, Superintendent & Board Secretary — Date

**DELTA EDUCATION**

W. Kent Walker — 5/2/18
Contractor Signature — Date

W. Kent Walker, Asst. Secretary
Print Name, Title

OAKLAND UNIFIED SCHOOL DISTRICT
Office of the General Counsel
APPROVED FOR FORM AND SUBSTANCE
By: Michael L. Smith, Attorney at Law 5/2/18

Form approved by OUSD General Counsel 4/27/18

# Exhibit B

Delta Education Price Quotes
& Price List

PLEASE NOTE: YOU MUST INCLUDE A COPY OF THIS PROPOSAL WITH YOUR PURCHASE ORDER


Delta Education Featuring FOSS
...because children learn by doing.

School Specialty Science
80 Northwest Blvd, Nashua, NH 03063
PO Box 3000, Nashua, NH 03061-3000
Phone: 800-338-5270 Fax: 800-282-9560

**Regional Sales Manager:** Richard Pacheco
602 750-0615


**Prepared On:** April 17, 2018

**Valid Through:** July 16, 2018

# DELTA EDUCATION PRICE QUOTE

**Prepared for:**
Brenda Tuohy Oakland USD

| | | | | | |
|---|---|---|---|---|---|
| **Complete Kits** | $ 1,127,623.24 | | | | |
| **Teacher Materials** | $ 291,744.85 | | | | |
| **Professional Development** | $ - | | | | |
| **Refill Kits** | $ - | | | | |
| **Reading Components** | $ 87,884.30 | | | | |
| **Living Materials** | $ - | | | | |
| **Conversion / Upgrade Kits** | $ - | | **Subtotal** | $ | 1,507,252.39 |
| **Miscellaneous** | $ - | 3% | **Shipping & Handling** | $ | 45,217.57 |
| **Online** | $ - | | **Living Material Shipping** | $ | - |
| **Subtotal** | $ 1,507,252.39 | 8.0% | ***Est. Sales Tax** | $ | 120,580.19 |
| | | | **Total*** | $ | 1,673,050.15 |

| Part Number | Item Description | Type | Unit Price | Qty | Extended Price | Comments |
|---|---|---|---|---|---|---|
| | **Kindergarten** | | | | | |
| 1487647 | KIT FOSS ANIMALS 2X2 NEXT GEN | Kit | $ 879.00 | 56 | $ 49,224.00 | |
| 1487669 | TEA TOOLKIT FOSS ANIMALS 2X2 NEXT GEN | TM | $ 225.95 | 83 | $ 18,753.85 | |
| 1487649 | KIT FOSS TREES+WEATHER NEXT GEN | Kit | $ 1,029.00 | 56 | $ 57,624.00 | |
| 1487671 | TEA TOOLKIT FOSS TREES+WEATHER NG | TM | $ 225.95 | 83 | $ 18,753.85 | |
| 1487648 | KIT FOSS MATERIALS+MOTION NG | Kit | $ 964.00 | 56 | $ 53,984.00 | |
| 1487670 | TEA TOOLKIT FOSS MATERIALS+MOTION NG | TM | $ 225.95 | 83 | $ 18,753.85 | |
| | **First Grade** | | | | | |
| 1487652 | KIT FOSS PLANTS + ANIMALS NEXT GEN | Kit | $ 919.00 | 56 | $ 51,464.00 | |
| 1487640 | SCI RES BBK FOSS PLNTS+ANMALS NEXT GEN | Reading | $ 34.95 | 78 | $ 2,726.10 | |
| 1487674 | TEA TOOLKIT FOSS PLNTS+ANIMLS NXT GN | TM | $ 225.95 | 78 | $ 17,624.10 | |
| 1487650 | KIT FOSS AIR+WEATHER NEXT GEN | Kit | $ 889.00 | 56 | $ 49,784.00 | |
| 1487638 | SCI RES BBK FOSS AIR + WEATHER NEXT GN | Reading | $ 34.95 | 78 | $ 2,726.10 | |
| 1487672 | TEA TOOLKIT FOSS AIR+WEATHER NEXT GEN | TM | $ 225.95 | 78 | $ 17,624.10 | |

PLEASE NOTE: YOU MUST INCLUDE A COPY OF THIS PROPOSAL WITH YOUR PURCHASE ORDER

| Part Number | Item Description | Type | Unit Price | Qty | Extended Price | Comments |
|---|---|---|---|---|---|---|
| 1487651 | KIT FOSS SOUND+LIGHT NEXT GEN | Kit | $ 1,069.00 | 56 | $ 59,864.00 | |
| 1487639 | SCI RES BBK FOSS SOUND+LIGHT NEXT GEN | Reading | $ 34.95 | 78 | $ 2,726.10 | |
| 1487673 | TEA TOOLKIT FOSS SOUND+LIGHT NEXT GN | TM | $ 225.95 | 78 | $ 17,624.10 | |
| | **Second Grade** | | | | | |
| 1487653 | KIT FOSS INSECTS + PLANTS NEXT GEN | Kit | $ 969.00 | 56 | $ 54,264.00 | |
| 1487641 | SCI RES BBK FOSS INSCTS+ PLNTS NEXT GEN | Reading | $ 34.95 | 80 | $ 2,796.00 | |
| 1487675 | TEA TOOLKIT FOSS INSCTS+PLNTS NEXT GN | TM | $ 225.95 | 80 | $ 18,076.00 | |
| 1509827 | KIT FOSS PEBS, SAND, AND SILT NEXT GEN | Kit | $ 1,034.00 | 56 | $ 57,904.00 | |
| 1487642 | SCI RES BBK FOSS PBLS SND+SILT NEXT GEN | Reading | $ 34.95 | 80 | $ 2,796.00 | |
| 1487676 | TEA TOOLKIT FOSS PBLS SND+SILT NEXT GN | TM | $ 225.95 | 80 | $ 18,076.00 | |
| 1487655 | KIT FOSS SOLIDS + LIQUIDS NEXT GEN | Kit | $ 1,179.00 | 56 | $ 66,024.00 | |
| 1487643 | SCI RES BBK FOSS SOL+LIQUIDS NEXT GEN | Reading | $ 34.95 | 80 | $ 2,796.00 | |
| 1487677 | TEA TOOLKIT FOSS SOL+LIQ NEXT GEN | TM | $ 225.95 | 80 | $ 18,076.00 | |
| | **Third Grade** | | | | | |
| 1487658 | KIT FOSS STRUCTURES OF LIFE NEXT GEN | Kit | $ 1,204.00 | 56 | $ 67,424.00 | |
| 1487679 | TEA TOOLKIT FOSS STRCTRS OF LIFE NEXT GEN | TM | $ 233.00 | 76 | $ 17,708.00 | |
| 1487659 | KIT FOSS WATER + CLIMATE NEXT GEN | Kit | $ 1,219.00 | 56 | $ 68,264.00 | |
| 1568281 | KIT FOSS ADD SESSION WATER + CLIMATE NG | Kit | $ 253.99 | 76 | $ 19,303.24 | |
| 1487657 | KIT FOSS MOTION + MATTER NEXT GEN | Kit | $ 1,174.00 | 56 | $ 65,744.00 | |
| 1487613 | SRB FOSS MOTION+ MATTER NEXT GEN PK/16 | Reading | $ 169.00 | 152 | $ 25,688.00 | |
| 1487678 | TEA TOOLKIT FOSS MOTION + MATTER NEXT GEN | TM | $ 233.00 | 76 | $ 17,708.00 | |
| | **Fourth Grade** | | | | | |
| 1487661 | KIT FOSS ENVIRONMENTS NEXT GEN | Kit | $ 1,319.00 | 48 | $ 63,312.00 | |
| 1487682 | TEA TOOLKIT FOSS ENVIRONMENTS NG | TM | $ 233.00 | 66 | $ 15,378.00 | |
| 1487664 | KIT FOSS SOILS ROCKS+LANDFORMS NEXT GEN | Kit | $ 1,339.00 | 48 | $ 64,272.00 | |
| 1487684 | TEA TOOLKIT FOSS SOILS RCKS+LNDFRMS NG | TM | $ 233.00 | 66 | $ 15,378.00 | |
| 1487660 | KIT FOSS ENERGY NEXT GENERATION | Kit | $ 1,689.00 | 48 | $ 81,072.00 | |
| 1487681 | TEA TOOLKIT FOSS ENERGY NEXT GEN | TM | $ 233.00 | 66 | $ 15,378.00 | |
| | **Fifth Grade** | | | | | |
| 1487665 | KIT FOSS LIVING SYSTEMS NEXT GEN | Kit | $ 1,314.00 | 48 | $ 63,072.00 | |
| 1487685 | TEA TOOLKIT FOSS LIVING SYSTEMS NG | TM | $ 233.00 | 67 | $ 15,611.00 | |
| 1530365 | KIT FOSS EARTH AND SUN NEXT GEN | Kit | $ 1,389.00 | 48 | $ 66,672.00 | |
| 1487624 | SCI RES BK FOSS EARTH AND SUN NG 16PK | Reading | $ 169.00 | 135 | $ 22,815.00 | |
| 1487689 | TEA TOOLKIT FOSS EARTH AND SUN NG | TM | $ 233.00 | 67 | $ 15,611.00 | |
| 1487666 | KIT FOSS MIXTURES+SOLUTIONS NEXT GEN | Kit | $ 1,424.00 | 48 | $ 68,352.00 | |
| 1487621 | SCI RES BK FOSS MIX+SOLUTIONS NG 16PK | Reading | $ 169.00 | 135 | $ 22,815.00 | |
| 1487687 | TEA TOOLKIT FOSS MIXTURES+SOLUTIONS NG | TM | $ 233.00 | 67 | $ 15,611.00 | |

2018

# FOSS® Next Generation™

## Program Components and Pricing

### Modules and Courses for Grades K–8


Delta Education

School Specialty. Science

# **FOSS Next Generation** 2018 Program Components and Pricing

| Part Number | Description | Price |
|---|---|---|
| 5N-1561981 | Complete Grade-Level Kit* | $1,804.00 |
| 5N-1590326 | Small Class Grade Level Kit[†] | $1,529.00 |
| 5N-1511917 | *Grade-Level Science Resources* Book - Each | $19.00 |

| Part Number | Description | Price |
|---|---|---|
| 5N-1487648 | Complete Kit - Print Edition[1] | $964.00 |
| 5N-1537039 | Complete Kit - Digital Edition[2] | $842.00 |
| 5N-1533746 | Refill Kit | $129.00 |
| 5N-1487695 | *Science Resources* Book - Each | $6.95 |
| 5N-1511922 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487627 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531685 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487636 | *Science Resources* Big Book | $34.95 |
| 5N-1524340 | *Science Resources* eBook - Class License | $159.00 |
| 5N-1533672 | Conversion Kit (From 2nd Ed. Wood & Paper) | $576.00 |
| 5N-1533682 | Conversion Kit (From 3rd Ed. Materials in Our World) | $338.00 |

| Part Number | Description | Price |
|---|---|---|
| 5N-1487649 | Complete Kit - Print Edition[1] | $1,029.00 |
| 5N-1571458 | Complete Kit - Digital Edition[2] | $909.00 |
| 5N-1533362 | Refill Kit | $30.00 |
| 5N-1487696 | *Science Resources* Book - Each | $6.95 |
| 5N-1511923 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487628 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531686 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487637 | Science Resources Big Book | $34.95 |
| 5N-1524349 | Science Resources eBook - Class License | $159.00 |
| 5N-1533365 | Conversion Kit (From 2nd Ed. Trees) | $520.00 |
| 5N-1533380 | Conversion Kit (From 3rd Ed. Trees & Weather) | $338.00 |

| Part Number | Description | Price |
|---|---|---|
| 5N-1487647 | Complete Kit - Print Edition[1] | $879.00 |
| 5N-1535961 | Complete Kit - Digital Edition[2] | $799.00 |
| | No refill kit required | |
| 5N-1487694 | *Science Resources* Book - Each | $6.95 |
| 5N-1511924 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487626 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531687 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487635 | *Science Resources* Big Book | $34.95 |
| 5N-1524339 | *Science Resources* eBook - Class License | $159.00 |
| 5N-1527600 | Conversion Kit (From 2nd Ed. Animals Two x Two) | $554.00 |
| 5N-1527880 | Conversion Kit (From 3rd Ed. Animals Two x Two) | $338.00 |
| 5N-1459531 | Living Material Cards - Set of 5 | $152.20 |

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**Order by Email:**
**customerservice.delta@schoolspecialty.com**

# **FOSS Next Generation** 2018 Program Components and Pricing

| Part Number | Description | Price |
|---|---|---|
| 5N-1560870 | Complete Grade-Level Kit* | $2,174.00 |
| 5N-1590817 | Small Class Grade Level Kit† | $1,474.00 |
| 5N-1511918 | *Grade-Level Science Resources* Book - Each | $19.00 |

| Part Number | Description | Price |
|---|---|---|
| 5N-1487651 | Complete Kit - Print Edition[1] | $1,069.00 |
| 5N-1529031 | Complete Kit - Digital Edition[2] | $947.00 |
| | *No refill kit required* | |
| 5N-1487714 | *Science Resources* Book - Each | $6.95 |
| 5N-1511925 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487630 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531688 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487639 | *Science Resources* Big Book | $34.95 |
| 5N-1511913 | *Science Resources* eBook - Class License | $159.00 |
| | ***NEW** module for Next Generation - No conversion available* | |

| Part Number | Description | Price |
|---|---|---|
| 5N-1487650 | Complete Kit - Print Edition[1] | $889.00 |
| 5N-1528978 | Complete Kit - Digital Edition[2] | $767.00 |
| 5N-1512126 | Refill Kit | $78.00 |
| 5N-1487697 | *Science Resources* Book - Each | $6.95 |
| 5N-1511926 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487629 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531689 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487638 | *Science Resources* Big Book | $34.95 |
| 5N-1511914 | *Science Resources* eBook - Class License | $159.00 |
| 5N-1513826 | Conversion Kit (From 2nd Ed. Air & Weather) | $524.00 |
| 5N-1513839 | Conversion Kit (From 3rd Ed. Air & Weather) | $338.00 |

| Part Number | Description | Price |
|---|---|---|
| 5N-1487652 | Complete Kit - Print Edition[1] | $919.00 |
| 5N-1528993 | Complete Kit - Digital Edition[2] | $792.00 |
| 5N-1512186 | Refill Kit | $84.00 |
| 5N-1487698 | *Science Resources* Book - Each | $6.95 |
| 5N-1511927 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487631 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531691 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487640 | *Science Resources* Big Book | $34.95 |
| 5N-1511915 | *Science Resources* eBook - Class License | $159.00 |
| 5N-1513842 | Conversion Kit (From 2nd Ed. Plants & Animals) | $604.00 |
| 5N-1513848 | Conversion Kit (From 3rd Ed. Plants & Animals) | $338.00 |
| 5N-270-4063 | Living Material Card - Pillbugs and Sowbugs | $54.95 |

# **FOSS Next Generation** 2018 Program Components and Pricing

| Part Number | Description | Price |
|---|---|---|
| 5N-1560870 | Complete Grade-Level Kit* | $2,174.00 |
| 5N-1591481 | Small Class Grade Level Kit[†] | $1,719.00 |
| 5N-1511919 | *Grade-Level Science Resources* Book - Each | $19.00 |

| Part Number | Description | Price |
|---|---|---|
| 5N-1487655 | Complete Kit - Print Edition[1] | $1,179.00 |
| 5N-1513086 | Complete Kit - Digital Edition[2] | $1,057.00 |
| 5N-1507166 | Refill Kit | $68.00 |
| 5N-1487701 | *Science Resources* Book - Each | $6.95 |
| 5N-1511928 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487634 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531697 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487643 | *Science Resources* Big Book | $34.95 |
| 5N-1504982 | *Science Resources* eBook - Class License | $159.00 |
| 5N-1512612 | Conversion Kit (From 2nd Ed. Solids & Liquids) | $734.00 |
| 5N-1512670 | Conversion Kit (From 3rd Ed. Solids & Liquids) | $338.00 |

| Part Number | Description | Price |
|---|---|---|
| 5N-1509827 | Complete Kit - Print Edition[1] | $1,034.00 |
| 5N-1513087 | Complete Kit - Digital Edition[2] | $912.00 |
| 5N-1509200 | Refill Kit | $38.00 |
| 5N-1487700 | *Science Resources* Book - Each | $6.95 |
| 5N-1511929 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487633 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531702 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487642 | *Science Resources* Big Book | $34.95 |
| 5N-1504989 | *Science Resources* eBook - Class License | $159.00 |
| 5N-1513061 | Conversion Kit (From 2nd Ed. Pebbles, Sand, Silt) | $644.00 |
| 5N-1513064 | Conversion Kit (From 3rd Ed. Pebbles, Sand, Silt) | $338.00 |

| Part Number | Description | Price |
|---|---|---|
| 5N-1487653 | Complete Kit - Print Edition[1] | $969.00 |
| 5N-1513088 | Complete Kit - Digital Edition[2] | $847.00 |
| 5N-1508800 | Refill Kit | $99.00 |
| 5N-1487699 | *Science Resources* Book - Each | $6.95 |
| 5N-1511930 | *Science Resources* Book - Each (Spanish) | $6.95 |
| 5N-1487632 | *Science Resources* Book - PK/8 | $49.95 |
| 5N-1531707 | *Science Resources* Book - PK/8 (Spanish) | $49.95 |
| 5N-1487641 | *Science Resources* Big Book | $34.95 |
| 5N-1504993 | *Science Resources* eBook - Class License | $159.00 |
| 5N-1512817 | Conversion Kit (From 2nd Ed. Insects & Plants) | $579.00 |
| 5N-1512863 | Conversion Kit (From 3rd Ed. Insects & Plants) | $338.00 |
| 5N-1459532 | Living Material Cards - Set of 4 | $133.20 |

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**Order by Email:**
**customerservice.delta@schoolspecialty.com**

# **FOSS Next Generation** 2018 Program Components and Pricing

## Grade 3

| Part Number | Description | Price |
|---|---|---|
| 5N-1508397 | Complete Grade-Level Kit* | $1,759.00 |
| 5N-1587911 | Small Class Grade Level Kit[t] | $1,414.00 |
| 5N-1494234 | *Grade-Level Science Resources* Book - Each | $28.00 |

| Motion and Matter | | |
|---|---|---|
| **Part Number** | **Description** | **Price** |
| 5N-1487657 | Complete Kit - Print Edition[1] | $1,174.00 |
| 5N-1512560 | Complete Kit - Digital Edition[2] | $962.00 |
| 5N-1495403 | Refill Kit | $40.00 |
| 5N-1487702 | *Science Resources* Book - Each | $14.00 |
| 5N-1508691 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487613 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531639 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1491622 | *Science Resources* eBook - Class License | $179.00 |
| | ***NEW** module for Next Generation - No conversion available* | |

| Water and Climate | | |
|---|---|---|
| **Part Number** | **Description** | **Price** |
| 5N-1487659 | Complete Kit - Print Edition[1] | $1,219.00 |
| 5N-1512585 | Complete Kit - Digital Edition[2] | $999.00 |
| 5N-1495419 | Refill Kit | $28.00 |
| 5N-1487705 | *Science Resources* Book - Each | $14.00 |
| 5N-1508692 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487615 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531643 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1491621 | *Science Resources* eBook - Class License | $179.00 |
| 5N-1512436 | Conversion Kit (From 2nd Ed. Water) | $584.00 |
| 5N-1512440 | Conversion Kit (From 3rd Ed. Water) | $338.00 |

| Structures of Life | | |
|---|---|---|
| **Part Number** | **Description** | **Price** |
| 5N-1487658 | Complete Kit - Print Edition[1] | $1,204.00 |
| 5N-1512518 | Complete Kit - Digital Edition[2] | $992.00 |
| 5N-1495414 | Refill Kit | $45.00 |
| 5N-1487704 | *Science Resources* Book - Each | $14.00 |
| 5N-1508690 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487614 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531442 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1491619 | *Science Resources* eBook - Class License | $179.00 |
| 5N-1512349 | Conversion Kit (From 2nd Ed. Structures of Life) | $809.00 |
| 5N-1512354 | Conversion Kit (From 3rd Ed. Structures of Life) | $338.00 |
| 5N-270-4184 | Living Material Card - Crayfish and Elodea | $97.95 |

# **FOSS Next Generation** 2018 Program Components and Pricing

## Grade 4

| Part Number | Description | Price |
|---|---|---|
| 5N-1558961 | Complete Grade-Level Kit* | $2,659.00 |
| 5N-1589069 | Small Class Grade Level Kit[1] | $1,924.00 |
| 5N-1511920 | *Grade-Level Science Resources* Book - Each | $28.00 |

### Energy

| Part Number | Description | Price |
|---|---|---|
| 5N-1487660 | Complete Kit - Print Edition[1] | $1,689.00 |
| 5N-1529841 | Complete Kit - Digital Edition[2] | $1,482.00 |
| 5N-1521060 | Refill Kit | $39.00 |
| 5N-1487706 | *Science Resources* Book - Each | $14.00 |
| 5N-1511931 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487616 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531646 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1514675 | *Science Resources* eBook - Class License | $179.00 |
| 5N-1521396 | Conversion Kit (From 2nd Ed. Magnetism & Elec.) | $1,094.00 |
| 5N-1521397 | Conversion Kit (From 3rd Ed. Energy & Electro.) | $338.00 |

### Soils, Rocks, and Landforms

| Part Number | Description | Price |
|---|---|---|
| 5N-1487664 | Complete Kit - Print Edition[1] | $1,339.00 |
| 5N-1529843 | Complete Kit - Digital Edition[2] | $1,122.00 |
| 5N-1515871 | Refill Kit | $49.00 |
| 5N-1487709 | *Science Resources* Book - Each | $14.00 |
| 5N-1511932 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487619 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531647 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1514677 | *Science Resources* eBook - Class License | $179.00 |
| 5N-1516495 | Conversion Kit (From 2nd Ed. Earth Materials) | $969.00 |
| 5N-1516496 | Conversion Kit (From 3rd Ed. Soils, Rocks & Land.) | $338.00 |

### Environments

| Part Number | Description | Price |
|---|---|---|
| 5N-1487661 | Complete Kit - Print Edition[1] | $1,319.00 |
| 5N-1529842 | Complete Kit - Digital Edition[2] | $1,102.00 |
| 5N-1514856 | Refill Kit | $56.00 |
| 5N-1487707 | *Science Resources* Book - Each | $14.00 |
| 5N-1511934 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487617 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531648 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1514676 | *Science Resources* eBook - Class License | $179.00 |
| 5N-1515558 | Conversion Kit (From 2nd Ed. Environments) | $694.00 |
| 5N-1515741 | Conversion Kit (From 3rd Ed. Environments) | $338.00 |
| 5N-1459533 | Living Material Cards - Set of 6 | $126.05 |

# **FOSS Next Generation** 2018 Program Components and Pricing

## Grade 5

| Part Number | Description | Price |
|---|---|---|
| 5N-1557817 | Complete Grade-Level Kit* | $2,424.00 |
| 5N-1589826 | Small Class Grade Level Kit† | $1,824.00 |
| 5N-1511921 | *Grade-Level Science Resources* Book - Each | $28.00 |

### Mixtures and Solutions

| Part Number | Description | Price |
|---|---|---|
| 5N-1487666 | Complete Kit - Print Edition[1] | $1,424.00 |
| 5N-1537300 | Complete Kit - Digital Edition[2] | $1,217.00 |
| 5N-1526690 | Refill Kit | $192.00 |
| 5N-1487711 | *Science Resources* Book - Each | $14.00 |
| 5N-1511935 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487621 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531649 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1524501 | *Science Resources* eBook - Class License | $179.00 |
| 5N-1526983 | Conversion Kit (From 2nd Ed. Mixtures & Sol.) | $789.00 |
| 5N-1526987 | Conversion Kit (From 3rd Ed. Mixtures & Sol.) | $338.00 |

### Earth and Sun

| Part Number | Description | Price |
|---|---|---|
| 5N-1530365 | Complete Kit - Print Edition[1] | $1,389.00 |
| 5N-1537223 | Complete Kit - Digital Edition[2] | $1,182.00 |
| 5N-1530522 | Refill Kit | $33.00 |
| 5N-1487713 | *Science Resources* Book - Each | $14.00 |
| 5N-1511936 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487624 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531655 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1524502 | *Science Resources* eBook - Class License | $179.00 |
| 5N-1530533 | Conversion Kit (From 2nd Ed. Water Planet) | $984.00 |
| 5N-1530536 | Conversion Kit (From 3rd Ed. Weather on Earth) | $500.00 |

### Living Systems

| Part Number | Description | Price |
|---|---|---|
| 5N-1487665 | Complete Kit - Print Edition[1] | $1,314.00 |
| 5N-1537232 | Complete Kit - Digital Edition[2] | $1,099.00 |
| 5N-1531644 | Refill Kit | $132.00 |
| 5N-1487710 | *Science Resources* Book - Each | $14.00 |
| 5N-1511937 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1487620 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1531682 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1524500 | *Science Resources* eBook - Class License | $179.00 |
| 5N-1532068 | Conversion Kit (From 2nd Ed. Living Systems) | $954.00 |
| 5N-1532069 | Conversion Kit (From 3rd Ed. Living Systems) | $338.00 |
| 5N-1459534 | Living Material Cards - Set of 2 | $55.10 |

# **FOSS Next Generation** 2018 Program Components and Pricing

## Grade 6

### Weather and Water

| Part Number | Description | Price |
|---|---|---|
| 5N-1558459 | Complete Kit[3] | $1,429.00 |
| 5N-1582797 | Lite Kit[4] | $1,310.00 |
| 5N-1558494 | Refill Kit | $124.00 |
| 5N-1558515 | *Science Resources* Book - Each | $22.00 |
| 5N-1602395 | *Science Resources* Book - Each (Spanish) | $22.00 |
| 5N-1558508 | *Science Resources* Book - PK/16 | $339.00 |
| 5N-1586499 | *Science Resources* Book - PK/16 (Spanish) | $339.00 |
| 5N-1582802 | *Science Resources* eBook - Class License | $199.00 |
| 5N-1558470 | Conversion Kit (From 1st Ed. Weather & Water) | $999.00 |

### Diversity of Life

| Part Number | Description | Price |
|---|---|---|
| 5N-1558460 | Complete Kit[3] - 5 Class Uses | $2,079.00 |
| 5N-1558461 | Complete Kit - 1 Class Use | $1,599.00 |
| 5N-1574730 | Lite Kit[4] - 5 Class Uses | $1,679.00 |
| 5N-1574740 | Refill Kit | $269.00 |
| 5N-1558516 | *Science Resources* Book - Each | $22.00 |
| 5N-1602396 | *Science Resources* Book - Each (Spanish) | $22.00 |
| 5N-1558509 | *Science Resources* Book - PK/16 | $339.00 |
| 5N-1586500 | *Science Resources* Book - PK/16 (Spanish) | $339.00 |
| 5N-1574787 | *Science Resources* eBook - Class License | $199.00 |
| 5N-1558471 | Conversion Kit (From 1st Ed. Diversity of Life) | $974.00 |
| 5N-270-4388 | Living Material Cards - Set of 5 | $45.95 |
| 5N-270-4377 | Living Material Card - Hissing Cockroach - Each | $132.95 |

### Human Systems Interactions

| Part Number | Description | Price |
|---|---|---|
| 5N-1465619 | Complete Kit[3] | $789.00 |
| 5N-1553979 | Refill Kit | $34.00 |
| 5N-1465674 | *Science Resources* Book - Each | $14.00 |
| 5N-1602387 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1465664 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1586491 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1553961 | *Science Resources* eBook - Class License | $199.00 |
| | ***NEW*** *module for Next Generation - No conversion available* | |

# **FOSS Next Generation** 2018 Program Components and Pricing

## Grade 7

### Chemical Interactions

| Part Number | Description | Price |
|---|---|---|
| 5N-1558463 | Complete Kit[3] | $1,984.00 |
| 5N-1602473 | Lite Kit[4] | $1,569.00 |
| 5N-1547083 | Refill Kit | $145.00 |
| 5N-1558519 | *Science Resources* Book - Each | $22.00 |
| 5N-1602398 | *Science Resources* Book - Each (Spanish) | $22.00 |
| 5N-1558511 | *Science Resources* Book - PK/16 | $339.00 |
| 5N-1586502 | *Science Resources* Book - PK/16 (Spanish) | $339.00 |
| 5N-1602475 | *Science Resources* eBook - Class License | $199.00 |
| 5N-1558474 | Conversion Kit (From 1st Ed. Chemical Interactions) | $800.00 |

### Earth History

| Part Number | Description | Price |
|---|---|---|
| 5N-1558458 | Complete Kit[3] | $2,094.00 |
| 5N-1584912 | Lite Kit[4] | $1,894.00 |
| | *No refill kit required* | |
| 5N-1558514 | *Science Resources* Book - Each | $22.00 |
| 5N-1602394 | *Science Resources* Book - Each (Spanish) | $339.00 |
| 5N-1558507 | *Science Resources* Book - PK/8 | $339.00 |
| 5N-1586498 | *Science Resources* Book - PK/16 (Spanish) | $339.00 |
| 5N-1584917 | *Science Resources* eBook - Class License | $199.00 |
| 5N-1558469 | Conversion Kit (From 1st Ed. Earth History) | $1,014.00 |

### Populations and Ecosystems

| Part Number | Description | Price |
|---|---|---|
| 5N-1558462 | Complete Kit[3] | $1,699.00 |
| 5N-1598545 | Lite Kit[4] | $1,489.00 |
| 5N-1558497 | Refill Kit | $115.00 |
| 5N-1558518 | *Science Resources* Book - Each | $22.00 |
| 5N-1602397 | *Science Resources* Book - Each (Spanish) | $22.00 |
| 5N-1558510 | *Science Resources* Book - PK/16 | $339.00 |
| 5N-1586501 | *Science Resources* Book - PK/16 (Spanish) | $339.00 |
| 5N-1598555 | *Science Resources* eBook - Class License | $199.00 |
| 5N-1558472 | Conversion Kit (From 1st Ed. Populations & Eco.) | $909.00 |
| 5N-1450925 | Living Material Card – Redworms, PK/150 | $31.05 |
| 5N-270-4380 | Living Materials Card - Milkweed Bugs, PK/30 | $55.95 |
| 5N-270-4379 | Living Materials Card - Mini Eco, SET/6 | $197.95 |

# **FOSS Next Generation** 2018 Program Components and Pricing

## Grade 8

### Heredity and Adaptation

| Part Number | Description | Price |
|---|---|---|
| 5N-1465620 | Complete Kit[3] | $999.00 |
| 5N-1558488 | Refill Kit | $220.00 |
| 5N-1465675 | *Science Resources* Book - Each | $14.00 |
| 5N-1602388 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1465665 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1586492 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1557049 | *Science Resources* eBook - Class License | $199.00 |
| | ***NEW*** *module for Next Generation - No conversion available* | |

### Electromagnetic Force

| Part Number | Description | Price |
|---|---|---|
| 5N-1465615 | Complete Kit[3] | $1,599.00 |
| | *No refill kit required* | |
| 5N-1465670 | *Science Resources* Book - Each | $14.00 |
| 5N-1602390 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1465660 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1586494 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1577419 | *Science Resources* eBook - Class License | $199.00 |
| | ***NEW*** *module for Next Generation - No conversion available* | |

### Gravity and Kinetic Energy

| Part Number | Description | Price |
|---|---|---|
| 5N-1465618 | Complete Kit[3] | $849.00 |
| | *No refill kit required* | |
| 5N-1465673 | *Science Resources* Book - Each | $14.00 |
| 5N-1602391 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1465663 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1586495 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1581146 | *Science Resources* eBook - Class License | $199.00 |
| | ***NEW*** *module for Next Generation - No conversion available* | |

### Waves

| Part Number | Description | Price |
|---|---|---|
| 5N-1465617 | Complete Kit[3] | $1,099.00 |
| 5N-1566010 | Refill Kit | $44.00 |
| 5N-1465672 | *Science Resources* Book - Each | $14.00 |
| 5N-1602389 | *Science Resources* Book - Each (Spanish) | $14.00 |
| 5N-1465662 | *Science Resources* Book - PK/16 | $169.00 |
| 5N-1586493 | *Science Resources* Book - PK/16 (Spanish) | $169.00 |
| 5N-1557050 | *Science Resources* eBook - Class License | $199.00 |
| | ***NEW*** *module for Next Generation - No conversion available* | |

# **FOSS Next Generation** 2018 Program Components and Pricing


| Planetary Science | | |
|---|---|---|
| **Part Number** | **Description** | **Price** |
| 5N-1558457 | Complete Kit[3] | $1,739.00 |
| 5N-1594384 | Lite Kit[4] | $1,617.00 |
| | *No refill kit required* | |
| 5N-1558513 | *Science Resources* Book - Each | $22.00 |
| 5N-1602393 | *Science Resources* Book - Each (Spanish) | $22.00 |
| 5N-1558506 | *Science Resources* Book - PK/16 | $339.00 |
| 5N-1586497 | *Science Resources* Book - PK/16 (Spanish) | $339.00 |
| 5N-1594390 | *Science Resources* eBook - Class License | $199.00 |
| 5N-1558468 | Conversion Kit (From 1st Ed. Planetary Science) | $909.00 |

*Grade Level Kits include three print Teacher Toolkits (Investigations Guide, Teacher Resources, and Teacher copy of FOSS Science Resources), online access to all digital content (except student eBooks), and materials for three (3) class uses 8 groups each (up to 32 students per class) for all three modules at a grade level.
***Student books must be purchased separately.***

♦Small Class Grade Level Kits include everything in the Complete Grade Level Kit but for only four groups (up to 16 students)

[1] Print Edition kits include one print Teacher Toolkit (Investigations Guide, Teacher Resources, and Teacher copy of FOSS Science Resources), 32 print copies of FOSS Science Resources, online access to all digital content (except student eBooks), and materials for three (3) class uses 8 groups each (up to 32 students per class)

[2] Digital Edition kits include online access to all digital content, a class license for the FOSS Science Resources eBook, and materials for three (3) class uses 8 groups each (up to 32 students per class)

[3] Complete kits include one print Teacher Toolkit (Investigations Guide, Teacher Resources, and Teacher copy of FOSS Science Resources), 32 print copies of FOSS Science Resources, online access to all digital content (except student eBooks), and materials for five (5) class uses of 8 groups each (up to 32 students per class)

[4] Lite kits are designed for well stocked science labs that already own common items like beakers, graduated cylinders, etc. or items found in multiple FOSS Next Generation Middle School courses. *Ask your sales representative which version is right for your school.*

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- Ship to customer name, telephone number, and address with zip code.
- A contact name, telephone number, and email address so that we may contact you if we have a question concerning your order.
- Any special shipping instructions or delivery deadlines.

### PROGRAM PRESENTATIONS

A Delta Education Regional Manager can come to your school or district office to show you how FOSS meets your specific curriculum needs. You will have an opportunity to look through the Investigations Guide, work with the materials by doing an actual investigation, read the *FOSS Science Resources,* and discuss implementation and training.

### PURCHASE EVALUATION

Your Delta Education Regional Manager can send select sample materials for previewing. For districts considering adopting FOSS, the Regional Manager can arrange a pilot program with your district science coordinator.

### FOSSweb TECHNICAL SUPPORT

For assistance with account questions, trouble logging in, and access code issues:
Phone: 800-258-1302, 8:00 a.m. to 5:30 p.m. EST
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### SHIPPING AND HANDLING

Shipping and handling charges are 12% of the total order with a minimum charge of $5.00.

### LIVING MATERIALS

After ordering living materials, a pre-paid postcard (for each item) will be shipped so that you can schedule delivery of your items. Please allow 3–4 weeks lead-time from the time we receive your order. In the event of inclement weather, your shipment could be delayed to ensure quality product. Living materials can only be shipped in the contiguous 48 states. Please check our website for the most current USDA restrictions. An additional handling charge will apply to any order that includes living materials. NOTE: All shipments contain more organisms than you will need for your activities. If a few organisms are dead on arrival, be sure to count the remaining organisms to determine if you have enough for your activities before calling for replacement.

Additional Shipping Charges for Live Items

| | |
|---|---|
| 1–3 items | $12.50 |
| 4–5 items | $22.00 |
| 6 or more items | $30.00 |

To ensure the success of life science investigations, FOSS users are encouraged to purchase any required live organisms locally to minimize the impact of potentially lengthy transit time and adverse weather conditions. Delta Education offers redeemable living material coupons for convenience.