

Board Office Use: <b>Legislative File Info.</b>	
File ID Number	24-0592
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## Board Cover Memorandum

**To** Board of Education

**From** Kyla Johnson-Trammell, Superintendent  
Sondra Aguilera, Chief Academic Officer  
Claire Fisher, Director, Secondary Instruction  
Chris Junsay, Coordinator, High School Science

**Meeting Date** April 24, 2024

**Subject** Curriculum Adoption for HS Biology

- Science and Global Issues: Biology (Lab-Aids) - New Bio Curriculum

**Ask of the Board** Adoption by the Board of Education of Resolution No. 2324-0018 - Selection and purchase of the following curricular materials:

*Science and Global Issues: Biology (Lab-Aids) for High School Biology, grades 9/10*

**Background** **Need for Updated Biology Curriculum**

In 2007, OUSD adopted the textbook, *Biology* by S. Nowicki (2008, *McDougal Littell*). The textbook was aligned to the 1998 standards. In 2013, California adopted the NGSS. NGSS requires a fundamental shift in the purpose of science education from knowing facts to being able to understand and explain the world around you. The NGSS has been thoughtfully created to integrate science disciplines as well as other content areas.

In 2014, the OUSD Science Department joined West Ed’s K-12 Alliance statewide NGSS Early Implementer Initiative. In partnership with this initiative, the Science Department along with OUSD science teachers began the development of the OUSD NGSS-aligned curriculum for grades 6, 7, 8, and Bio9. The development and implementation of this transitional curriculum provided a critical professional learning opportunity to unpack the new standards. One of the goals for the curriculum development project was to provide equity, which is highlighted in both the NGSS and the OUSD values.

Support for the development and implementation of this transitional NGSS-aligned curriculum ended at the end of the 2016-17 school year – middle school was able to adopt a curriculum, but high school teachers were left with something unfinished. Parts of the curriculum are still used by a handful of teachers in OUSD even though the curriculum is incomplete and there are not enough resources to maintain the online and instructional materials. This also means there is not a supported, updated, or consistent curriculum available for new science teachers to use. Moreover, most

are spending their own money to secure materials. Staff turnover, support for new teachers, and availability of quality instructional materials continue to be a challenge in providing all students consistent access to high quality science learning.

**Discussion**                      **Selection Process**

Teachers named areas of strength and concerns for both curricula that they and their students experienced throughout the pilot. During the official deliberation process, teachers reviewed data from the feedback surveys that focused on: (1) NGSS Alignment; (2) Language, Literacy, and Common Core Connection; (3) Student Materials and Equity; (4) Assessment; and (5) Teacher Materials and Usability. Overall, on a 5-point scale, Lab-Aids had a mean rating of 4.30. It also scored higher for each of the factors named above. These higher scores reflect the notable differences between materials offered to students for hands-on activities, ways readings and text are broken down, integrated translation and text-to-speech tools within the digital resources, assessment banks with supporting rubrics, and teacher guides. Many of these features came up in previous surveys around teacher needs. Overall, 100% of the pilot teachers represented on the survey and during deliberation recommended adopting Lab-Aids. Given this feedback, the OUSD Science Department recommends the Board of Education to approve the adoption of *Science and Global Issues: Biology (Lab-Aids)* for high school Biology.

**Fiscal Impact**

There are both one-time costs for adoption materials (kits, books, teacher materials) and annual refill expenditures. Lab-Aids also provides professional learning. We will use their trainers exclusively during the initial years of implementation. As our own teachers and leads become trainers, we will utilize their Professional Learning services less. The complete purchase of Lab-Aids science instructional materials and professional learning for high school biology over 7 years is estimated to be **\$2,178,527.53**. This includes the expected annual cost to refurbish Lab-Aids kits. The refurbishment of consumable materials and purchase of live organisms each year will not exceed \$69,823.78. This estimate is based on the need to refill all consumable items each year, and will most likely be much lower. An evaluation from other districts utilizing the program shows it being closer to 50-75% of that annual cost. The funding resources that will be utilized for initial costs are Supplemental and Concentration Carryover, and annually, the CA State Lottery allocation.

**Summary of Instructional Materials Costs: Years 1-3, 2024-2027**

Year	Summary of Materials to be Purchased	Costs
<b>2024-25</b>	Lab-Aids portal Teacher Licenses Printed and bound teacher resources Lab-Aids portal Student Licenses Digital and print full-length Biology texts Material Kits	<b>\$958,884.85</b>
<b>2025-26</b>	Lab-Aids material Kits refills	<b>\$69,823.78</b>

<b>2026-27</b>	Lab-Aids material Kits refills	<b>\$69,823.78</b>
<b>TBD</b>	Lab-Aids material Kits refills	<b>\$69,823.78</b>
<b>TBD</b>	Lab-Aids material Kits refills	<b>\$69,823.78</b>
<b>TBD</b>	Lab-Aids material Kits refills	<b>\$69,823.78</b>
<b>TBD</b>	Lab-Aids material Kits refills	<b>\$69,823.78</b>
	<b>TOTAL =</b>	<b>\$1,377,827.53</b>

*\*This assumes that all consumable materials are used by every teacher each year and needs to be completely refurbished; annual cost will most likely be lower*

**Summary Table - Professional Learning: Years 1-3, 2024-2027**

<b>Year</b>	<b>Summary of Professional Learning Offerings</b>	<b>Costs</b>
<b>2024-25</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days <i>Spring 2024 Chemistry Pilot</i>	<b>\$155,900.00</b>
<b>2025-26</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days <i>Curriculum training for trainers PD</i>	<b>\$154,900.00</b>
<b>2026-27</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days <i>Curriculum training for trainers PD</i>	<b>\$109,900.00</b>
<b>TBD</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days Science Teacher Lead/Coaching Collaborative	<b>\$95,000.00</b>
<b>TBD</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training	<b>\$95,000.00</b>

	Monthly 2nd Wednesday Series September & January PD Days Science Teacher Lead/Coaching Collaborative	
<b>TBD</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days Science Teacher Lead/Coaching Collaborative	<b>\$95,000.00</b>
<b>TBD</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days Science Teacher Lead/Coaching Collaborative	<b>\$95,000.00</b>
	<b>TOTAL =</b>	<b>\$800,700.00</b>

**Attachment(s)**

- Resolution No. 2324-0018
- Services Agreement 2023-2024
- Attachment A: Bio Curriculum Adoption Proposal
- Attachment B: Budget Proposal for Instructional Materials
- Attachment C: Budget Proposal for Ongoing Professional Learning
- Presentation - Bio Curriculum Adoption



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**RESOLUTION  
OF THE  
BOARD OF EDUCATION  
OF THE  
OAKLAND UNIFIED SCHOOL DISTRICT  
NO. 2324-0018**

**Curriculum Adoption for High School Biology**

**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 approved standards for curriculum, certain curriculum frameworks, and has approved a list of basic instructional materials for use in 9-12 Grade;

**WHEREAS**, the Governing Board shall select instructional materials for use in grades 9-12th 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 9-12th grade 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;
- 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;

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- 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 Attachments A-C, instructional review committees comprised of teachers, teachers on special assignment and district content specialists, with the majority of the participants being classroom teachers, reviewed 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:

- *Science and Global Issues: Biology (Lab-Aids)* for High School Biology, grades 9-10

**WHEREAS**, expenditures, pursuant to an Agreements between the District and Science and Global Issues: Biology by Lab-Aids shall not exceed the total amount of \$2,178,527.53, for the period July 1, 2024 to June 30, 2027, for the purchase of 9-10 Biology materials related thereto;

**NOW , THEREFORE, BE IT RESOLVED** that the Board of Education hereby finds that Science and Global Issues: Biology by Lab-Aids instructional materials meet the standards for adoption and hereby selects Science and Global Issues: Biology by Lab-Aids for use in District schools.

**BE IT FURTHER RESOLVED** that the Board approves the Agreement between the District and Lab-Aids for Science and Global Issues: Biology. This shall not exceed the total amount of \$2,178,527.53, for the period July 1, 2024 to June 30, 2027, for the purchase of 9-10 Biology materials.

Passed by the following vote:

PREFERENTIAL AYE:

PREFERENTIAL NOE:

PREFERENTIAL ABSTENTION:

PREFERENTIAL RECUSE:

AYES:

NOES:

ABSTAINED:

RECUSE:

ABSENT:

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**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 April 24, 2024.

**OAKLAND UNIFIED SCHOOL DISTRICT**

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Benjamin "Sam" Davis  
President, Board of Education

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Kyla Johnson-Trammell  
Secretary, Board of Education

## SERVICES AGREEMENT

This Services Agreement (“AGREEMENT”) is a legally binding contract entered into between the Oakland Unified School District (“OUSD”) and the entity or individual (“VENDOR,” together with OUSD, “PARTIES”) named in **Exhibit A**, attached hereto and incorporated herein by reference. Unless otherwise stated herein, “VENDOR INDIVIDUAL” includes (to the extent they exist): VENDOR Board members, officers, trustees, and directors; VENDOR employees, agents, consultants, contractors and subcontractors, representatives, and other similar individuals; and volunteers and others unpaid persons under VENDOR’s direction, invitation, or control.

The PARTIES hereby agree as follows:

1. **Services.** VENDOR shall provide the services (“SERVICES”) as described in **Exhibit A**.
2. **Term.** The term (“TERM”) of this AGREEMENT is established in **Exhibit A**.
3. **Compensation.**
  - a. Over the TERM, OUSD agrees to pay VENDOR the amount of money stated in **Exhibit A** for satisfactorily performing the SERVICES. OUSD shall not pay and shall not be liable to VENDOR for any costs or expenses paid or incurred by VENDOR not described in **Exhibit A**.
  - b. Compensation for SERVICES performed outside of the TERM (e.g., prior to execution of this AGREEMENT or after its termination) shall be at OUSD’s sole discretion and in an amount solely determined by OUSD. VENDOR agrees that it shall not expect or demand compensation for the performance of such SERVICES.
  - c. VENDOR acknowledges and agrees not to expect or demand compensation for any SERVICES performed prior to the PARTIES, particularly OUSD, validly and properly executing this AGREEMENT and VENDOR shall not rely on verbal or written communication from any individual, other than the OUSD Superintendent or the OUSD Legal Counsel, stating that OUSD has validly and properly executed this AGREEMENT.
  - d. Payment for SERVICES shall be made for all undisputed amounts no more frequently than in monthly installment payments within sixty (60) days after VENDOR submits an invoice to OUSD, in accordance with Paragraph 4 (Invoicing), for the SERVICES actually performed and after OUSD’s written approval that the SERVICES were actually performed. The granting of any payment by OUSD, or the receipt thereof by VENDOR, shall in no way lessen the liability of VENDOR to correct unsatisfactory performance of SERVICES, even if the unsatisfactory character of the performance was not apparent or detected at the time a payment was made. If OUSD determines that VENDOR’s performance does not conform to the requirements of this AGREEMENT, VENDOR agrees to correct its performance without delay.

4. **Invoicing.** Invoices furnished by VENDOR under this AGREEMENT must be in a form acceptable to OUSD.
  - a. All amounts paid by OUSD shall be subject to audit by OUSD. Invoices shall include, without limitation: VENDOR name, VENDOR address, invoice date, invoice number, purchase order number, name of school or department to which the SERVICES were provided, name(s) of the person(s) performing the SERVICES, date(s) the SERVICES were performed, brief description of the SERVICES provided on each date, total invoice amount, and the basis for the total invoice amount (e.g., if hourly rate, the number of hours on each date and the rate for those hours).
  - b. If OUSD, at its sole discretion, determines an invoice fails to include the required elements, OUSD will not pay the invoice and will inform VENDOR of the missing items; VENDOR shall resubmit an invoice that includes the required elements before OUSD will pay the invoice.
  - c. Invoices must be submitted no more frequently than monthly, and within 30 days of the conclusion of the applicable billing period. OUSD reserves the right to refuse to pay untimely invoices.
  - d. OUSD reserves the right to add or change invoicing requirements. If OUSD does add or change invoicing requirements, it shall notify VENDOR in writing and the new or modified requirements shall be mandatory upon receipt by VENDOR of such notice.
  - e. To the extent that VENDOR has described how the SERVICES may be provided both in-person and not in-person, VENDOR's invoices shall—in addition to any invoice requirement added or changed under subparagraph (d)—indicate whether the SERVICES were provided in-person or not.
  - f. All invoices furnished by VENDOR under this AGREEMENT shall be delivered to OUSD via email unless OUSD requests, in writing, a different method of delivery.
  
5. **Suspension.** If OUSD, at its sole discretion, develops health and safety concerns related to VENDOR's provision of SERVICES, then the OUSD Superintendent or an OUSD Chief may, upon approval by OUSD legal counsel, issue a notice to VENDOR to suspend this AGREEMENT, in which case VENDOR shall stop providing SERVICES under this AGREEMENT until further notice from OUSD. OUSD shall compensate VENDOR for the SERVICES satisfactorily provided through the date of suspension.
  
6. **Termination.** Upon termination consistent with this Paragraph (Termination), VENDOR shall provide OUSD with all materials produced, maintained, or collected by VENDOR pursuant to this AGREEMENT, whether or not such materials are complete or incomplete or are in final or draft form.
  - a. For Convenience by OUSD. OUSD may at any time terminate this AGREEMENT upon thirty (30) days prior written notice to VENDOR. OUSD shall compensate VENDOR for SERVICES satisfactorily provided through the date of termination. Upon approval by OUSD legal counsel, the OUSD Superintendent or an OUSD Chief may issue the termination notice without prior approval by the OUSD Governing Board, in which case this AGREEMENT would terminate upon ratification of the termination by the OUSD Governing Board or thirty (30) days after the notice was

provided, whichever is later. VENDOR shall immediately stop providing SERVICES upon receipt of the termination notice from the OUSD Superintendent or OUSD Chief.

- b. For Cause. Either PARTY may terminate this AGREEMENT by giving written notice of its intention to terminate for cause to the other PARTY. Written notice shall contain the reasons for such intention to terminate, which shall include (i) material violation of this AGREEMENT or (ii) if either PARTY is adjudged bankrupt, makes a general assignment for the benefit of creditors, or a receiver is appointed on account of its insolvency. Upon approval by OUSD legal counsel, the OUSD Superintendent or an OUSD Chief may issue the termination notice without prior approval by the OUSD Governing Board, in which case this AGREEMENT would terminate upon ratification of the termination by the OUSD Governing Board or three (3) days after the notice was provided, whichever is later, unless the condition or violation ceases or satisfactory arrangements for its correction are made. VENDOR shall immediately stop providing SERVICES upon receipt of the termination notice from the OUSD Superintendent or OUSD Chief.
  - c. Due to Unforeseen Emergency or Acts of God. Notwithstanding any other language of this AGREEMENT, if there is an unforeseen emergency or an Act of God during the TERM that would prohibit or limit, at the sole discretion of OUSD, the ability of VENDOR to perform the SERVICES, OUSD may terminate this AGREEMENT upon seven (7) days prior written notice to VENDOR. The OUSD Governing Board may issue this type of termination notice or the OUSD Superintendent, upon approval by OUSD legal counsel, may issue this type of the termination notice without the need for approval or ratification by the OUSD Governing Board. VENDOR shall immediately stop providing SERVICES upon receipt of the termination notice from the OUSD Superintendent.
  - d. Due to Failure to Ratify by OUSD Board. If, consistent with Paragraph 41 (Signature Authority), this AGREEMENT is executed on behalf of OUSD by the signature of the Superintendent, a Chief, a Deputy Chief, or an Executive Director, and the Board thereafter declines to ratify this AGREEMENT, this AGREEMENT shall automatically terminate on the date that the Board declines to ratify it. OUSD shall compensate VENDOR for the SERVICES satisfactorily provided through the date of termination.
7. **Data and Information Requests.**
- a. VENDOR shall timely provide OUSD with any data and information OUSD reasonably requests related to the provision of the SERVICES.
  - b. VENDOR shall register with and maintain current information within OUSD's Community Partner database unless OUSD communicates to VENDOR in writing otherwise, based on OUSD's determination that the SERVICES are not related to community school outcomes. If and when VENDOR's programs and school site(s) change (either midyear or in subsequent years), VENDOR shall promptly update the information in the database.

8. **Confidentiality and Data Privacy.**

- a. OUSD may share information with VENDOR pursuant to this AGREEMENT in order to further the purposes thereof. VENDOR and VENDOR INDIVIDUALS shall maintain the confidentiality of all information received in the course of performing the SERVICES, provided such information is (i) marked or identified as “confidential” or “privileged,” or (ii) reasonably understood to be confidential or privileged.
- b. VENDOR understands that student data is confidential. VENDOR or VENDOR INDIVIDUALS may only access or receive identifiable student data, other than directory information, in connection with this AGREEMENT only after VENDOR and OUSD execute (i) a California Student Data Privacy Agreement (“CSDPA”) or CSDPA Exhibit E, if VENDOR is a software vendor, or (ii) the OUSD Data Sharing Agreement, if VENDOR is not a software vendor. Notwithstanding Paragraph 24 (Indemnification), should VENDOR or VENDOR INDIVIDUALS access or receive identifiable student data, other than directory information, without first executing such an agreement, VENDOR shall be solely liable for any and all claims or losses resulting from its access or receipt of such data.
- c. All confidentiality requirements, including those set forth in the separate data sharing agreement, extend beyond the termination of this AGREEMENT.

9. **Copyright/Trademark/Patent/Ownership.** VENDOR understands and agrees that all matters produced under this AGREEMENT, excluding any intellectual property that existed prior to execution of this AGREEMENT, shall be works for hire as defined under Title 17 of the United States Code, and all copyrights in those works are the property of OUSD. These matters include, without limitation, drawings, plans, specifications, studies, reports, memoranda, computation sheets, the contents of computer diskettes, artwork, copy, posters, billboards, photographs, videotapes, audiotapes, systems designs, software, reports, diagrams, surveys, source codes or any other original works of authorship, or other documents prepared by VENDOR in connection with the SERVICES performed under this AGREEMENT. VENDOR cannot use, reproduce, distribute, publicly display, perform, alter, remix, or build upon matters produced under this AGREEMENT without OUSD’s express written permission. OUSD shall have all right, title and interest in said matters, including the right to register the copyright, trademark, and/or patent of said matter in the name of OUSD. OUSD may, with VENDOR’s prior written consent, use VENDOR’s name in conjunction with the sale, use, performance and distribution of the matters, for any purpose and in any medium.

10. **Alignment and Evaluation.**

- a. VENDOR agrees to work and communicate with OUSD staff, both formally and informally, to ensure that the SERVICES are aligned with OUSD’s mission and are meeting the needs of students as determined by OUSD.
- b. OUSD may evaluate VENDOR or VENDOR INDIVIDUALS in any reasonable manner which is permissible under the law. OUSD’s evaluation may include, without limitation: (i) requesting that OUSD employee(s) evaluate the performance of

VENDOR or VENDOR INDIVIDUALS, and (ii) announced and unannounced observance of VENDOR or VENDOR INDIVIDUALS.

11. **Inspection and Approval.** VENDOR agrees that OUSD has the right and agrees to provide OUSD with the opportunity to inspect any and all aspects of the SERVICES performed including, but not limited to, any materials (physical or electronic) produced, created, edited, modified, reviewed, or otherwise used in the preparation, performance, or evaluation of the SERVICES. In accordance with Paragraph 3 (Compensation), the SERVICES performed by VENDOR must meet the approval of OUSD, and OUSD reserves the right to direct VENDOR to redo the SERVICES, in whole or in part, if OUSD, in its sole discretion, determines that the SERVICES were not performed in accordance with this AGREEMENT.
12. **Equipment and Materials.** VENDOR shall provide all equipment, materials, and supplies necessary for the performance of this AGREEMENT.
13. **Legal Notices.** Based on contact information set forth in **Exhibit A**, all legal notices provided for under this AGREEMENT shall be sent: (i) via email, (ii) personally delivered during normal business hours, or (iii) sent by U.S. Mail (certified, return receipt requested) with postage prepaid to the other PARTY. Notice shall be effective when received if personally served or emailed or, if mailed, three days after mailing. Either PARTY must give written notice of a change of mailing address or email.
14. **Status.**
  - a. This is not an employment contract. VENDOR, in the performance of this AGREEMENT, shall be and act as an independent contractor.
  - b. If VENDOR is a natural person, VENDOR verifies all of the following:
    - (i) VENDOR is free from the control and direction of OUSD in connection with VENDOR's work;
    - (ii) VENDOR's work is outside the usual course of OUSD's business; and
    - (iii) VENDOR is customarily engaged in an independently established trade, occupation, or business of the same nature as that involved in the work performed for OUSD.
  - c. If VENDOR is a business entity, VENDOR understands and agrees that it and any and all VENDOR INDIVIDUALS shall not be considered employees of OUSD, and are not entitled to benefits of any kind or nature normally provided employees of OUSD and/or to which OUSD's employees are normally entitled, including, but not limited to, State Unemployment Compensation or Worker's Compensation. VENDOR shall assume full responsibility for payment of all Federal, State, and local taxes or contributions, including unemployment insurance, social security and income taxes with respect to VENDOR INDIVIDUALS. VENDOR verifies all of the following:
    - (i) VENDOR is free from the control and direction of OUSD in connection with the performance of the work;
    - (ii) VENDOR is providing the SERVICES directly to OUSD rather than to customers of OUSD;



- (iii) the contract between OUSD and VENDOR is in writing;
- (iv) VENDOR has the required business license or business tax registration, if the work is performed in a jurisdiction that requires VENDOR to have a business license or business tax registration;
- (v) VENDOR maintains a business location that is separate from the business or work location of OUSD;
- (vi) VENDOR is customarily engaged in an independently established business of the same nature as that involved in the work performed;
- (vii) VENDOR actually contracts with other businesses to provide the same or similar services and maintains a clientele without restrictions from OUSD;
- (viii) VENDOR advertises and holds itself out to the public as available to provide the same or similar services;
- (ix) VENDOR provides its own tools, vehicles, and equipment to perform the SERVICES;
- (x) VENDOR can negotiate its own rates;
- (xi) VENDOR can set its own hours and location of work; and
- (xii) VENDOR is not performing the type of work for which a license from the Contractor's State License Board is required, pursuant to Chapter 9 (commencing with section 7000) of Division 3 of the Business and Professions Code.

15. **Qualifications, Training, and Removal.**

- a. VENDOR represents and warrants that VENDOR and all VENDOR INDIVIDUALS have the necessary and sufficient experience, qualifications, and ability to perform the SERVICES in a professional manner, without the advice, control or supervision of OUSD. VENDOR will perform the SERVICES in accordance with generally and currently accepted principles and practices of its profession for services to California school districts and in accordance with applicable laws, codes, rules, regulations, and/or ordinances.
- b. VENDOR represents and warrants that all VENDOR INDIVIDUALS are specially trained, experienced, competent and fully licensed to provide the SERVICES identified in this AGREEMENT in conformity with the laws and regulations of the State of California, the United States of America, and all local laws, ordinances and/or regulations, as they may apply.
- c. VENDOR agrees to immediately remove or cause the removal of any VENDOR INDIVIDUAL from OUSD property upon receiving notice from OUSD of such desire. OUSD is not required to provide VENDOR with a basis or explanation for the removal request.

16. **Certificates/Permits/Licenses/Registration.** VENDOR shall ensure that all VENDOR INDIVIDUALS secure and maintain in force such certificates, permits, licenses, and registration as are required by law in connection with the furnishing of the SERVICES pursuant to this AGREEMENT.

17. **Insurance.**

- a. Commercial General Liability Insurance. VENDOR shall maintain Commercial General Liability Insurance, including automobile coverage, with limits of at least one million dollars (\$1,000,000) per occurrence, and two million dollars (\$2,000,000) aggregate, sexual misconduct, harassment, bodily injury and property damage. Coverage for corporal punishment, sexual misconduct, and harassment may either be provided through General Liability Insurance or Professional Liability Insurance. The coverage shall be primary as to OUSD and shall name OUSD as an additional insured with the additional insured endorsement provided to OUSD within 15 days of effective date of this AGREEMENT (and within 15 days of each new policy year thereafter during the TERM). Evidence of insurance shall be attached to this AGREEMENT or otherwise provided to OUSD upon request. Endorsement of OUSD as an additional insured shall not affect OUSD's rights to any claim, demand, suit or judgment made, brought or recovered against VENDOR. The policy shall protect VENDOR and OUSD in the same manner as though each were separately issued. Nothing in said policy shall operate to increase the Insurer's liability as set forth in the policy beyond the amount or amounts shown or to which the Insurer would have been liable if only one interest were named as an insured. The requirements of this subparagraph may be specifically waived as noted in **Exhibit A**.
- b. Workers' Compensation Insurance. VENDOR shall procure and maintain, at all times during the TERM of this AGREEMENT, Workers' Compensation Insurance in conformance with the laws of the State of California (including, but not limited to, Labor Code section 3700) and Federal laws when applicable. Employers' Liability Insurance shall not be less than one million dollars (\$1,000,000) per accident or disease. The requirements of this subparagraph may be specifically waived as noted in **Exhibit A**.

18. **Testing and Screening.**

- a. Tuberculosis Screening. VENDOR shall ensure that all VENDOR INDIVIDUALS who will be working at OUSD sites for more than six hours in total during the TERM or who work with students (regardless of the length of time) have submitted to a tuberculosis risk assessment as required by Education Code section 49406 within the prior 60 days. If tuberculosis risk factors were identified for a VENDOR INDIVIDUAL, that VENDOR INDIVIDUAL must submit to an intradermal or other approved tuberculosis examination to determine if that VENDOR INDIVIDUAL is free of infectious tuberculosis. If the results of the examination are positive, VENDOR shall obtain an x-ray of the lungs. VENDOR, at its discretion, may choose to submit a VENDOR INDIVIDUAL to the examination instead of the risk assessment. The requirements of this subparagraph may be specifically waived as noted in **Exhibit A**.
- b. Fingerprinting/Criminal Background Investigation. For all VENDOR INDIVIDUALS providing the SERVICES, VENDOR shall ensure completion of fingerprinting and criminal background investigation and shall request and regularly review

subsequent arrest records. VENDOR confirms that no VENDOR INDIVIDUAL providing the SERVICES has been convicted of a felony, as that term is defined in Education Code section 45122.1. VENDOR shall provide the results of the investigations and subsequent arrest notifications to OUSD. For purposes of this subparagraph, VENDOR shall use either California Department of Justice or Be A Mentor, Inc. (<http://beamentor.org/OUUSDPartner>) finger-printing and subsequent arrest notification services. The requirements of this subparagraph may be specifically waived as noted in **Exhibit A**.

19. **Incident/Accident/Mandated Reporting.**

- a. VENDOR shall notify OUSD, via email pursuant to Paragraph 13 (Legal Notices), within twelve (12) hours of learning of any significant accident or incident in connection with the provision of the SERVICES. Examples of a significant accident or incident include, without limitation, an accident or incident that involves law enforcement, or possible or alleged criminal activity, or possible or actual exposure to a communicable disease such as COVID-19. VENDOR shall properly submit required accident or incident reports within one business day pursuant to the procedures specified by OUSD. VENDOR shall bear all costs of compliance with this Paragraph.
- b. To the extent that a VENDOR INDIVIDUAL is included on the list of mandated reporters found in Penal Code section 11165.7, VENDOR agrees to inform that VENDOR INDIVIDUAL, in writing, that they are a mandated reporter, and describing the associated obligations to report suspected cases of abuse and neglect pursuant to Penal Code section 11166.5.

20. **Health and Safety Orders and Requirements; Site Closures.**

- a. VENDOR shall adhere to any health or safety orders or requirements issued at the time of the execution of this AGREEMENT or in the future by OUSD or other public entities (“Orders”).
- b. Except as possibly stated otherwise in **Exhibit A**, VENDOR is able to meet its obligations and perform the SERVICES required pursuant to this AGREEMENT in accordance with any Order; to the extent that VENDOR becomes unable to do so, VENDOR shall immediately inform OUSD in writing.
- c. Except as possibly stated otherwise in **Exhibit A**, to the extent that there may be a site closure (e.g., due to poor air quality, planned loss of power, strike) or similar event in which school sites and/or District offices may be closed or otherwise inaccessible, VENDOR is able to meet its obligations and perform the SERVICES required pursuant to this AGREEMENT; to the extent that VENDOR becomes unable to do so, VENDOR shall immediately inform OUSD in writing.
- d. VENDOR shall bear all costs of compliance with this Paragraph, including but not limited lost compensation for failure to provide SERVICES.

21. **Conflict of Interest.**
  - a. VENDOR and all VENDOR INDIVIDUALS shall abide by and be subject to all applicable, regulations, statutes, or other laws regarding conflict of interest. VENDOR shall not hire, contract with, or employ any officer or employee of OUSD during the TERM without the prior approval of OUSD Legal Counsel.
  - b. VENDOR affirms, to the best of his/her/its knowledge, that there exists no actual or potential conflict of interest between VENDOR's family, business, or financial interest and the SERVICES provided under this AGREEMENT, and in the event of any change in either private interest or the SERVICES under this AGREEMENT, any question regarding a possible conflict of interest which may arise as a result of such change will be immediately brought to OUSD's attention in writing.
  - c. Through its execution of this AGREEMENT, VENDOR acknowledges that it is familiar with the provisions of section 1090 *et seq.* and section 87100 *et seq.* of the Government Code, and certifies that it does not know of any facts which constitute a violation of said provisions. In the event VENDOR receives any information subsequent to execution of this AGREEMENT which might constitute a violation of said provisions, VENDOR agrees it shall immediately notify OUSD in writing.
  
22. **Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion.** VENDOR 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 AGREEMENT, certifies that neither it nor its principals appear on the Excluded Parties List (<https://www.sam.gov/>).
  
23. **Limitation of OUSD Liability.** Other than as provided in this AGREEMENT, OUSD's financial obligations under this AGREEMENT shall be limited to the compensation described in Paragraph 3 (Compensation). Notwithstanding any other provision of this AGREEMENT, in no event shall OUSD be liable, regardless of whether any claim is based on contract or tort, for any special, consequential, indirect or incidental damages, including, but not limited to, lost profits or revenue, arising out of, or in connection with, this AGREEMENT for the SERVICES performed in connection with this AGREEMENT.
  
24. **Indemnification.**
  - a. To the furthest extent permitted by California law, VENDOR shall indemnify, defend and hold harmless OUSD, its Governing Board, agents, representatives, officers, consultants, employees, trustees, and volunteers ("OUSD Indemnified Parties") from any and all claims or losses accruing or resulting from injury, damage, or death of any person or entity arising out of VENDOR's performance of this AGREEMENT. VENDOR also agrees to hold harmless, indemnify, and defend OUSD Indemnified Parties from any and all claims or losses incurred by any supplier or subcontractor furnishing work, services, or materials to VENDOR arising out of the performance of this AGREEMENT. VENDOR shall, to the fullest extent permitted by California law, defend OUSD Indemnified Parties at VENDOR's own expense, including attorneys'

fees and costs, and OUSD shall have the right to accept or reject any legal representation that VENDOR proposes to defend OUSD Indemnified Parties.

- b. To the furthest extent permitted by California law, OUSD shall indemnify, defend, and hold harmless VENDOR and VENDOR INDIVIDUALS from any and all claims or losses accruing or resulting from injury, damage, or death of any person or entity arising out of OUSD's performance of this AGREEMENT. OUSD shall, to the fullest extent permitted by California law, defend VENDOR and VENDOR INDIVIDUALS at OUSD's own expense, including attorneys' fees and costs.
25. **Audit.** VENDOR shall establish and maintain books, records, and systems of account, in accordance with generally accepted accounting principles, reflecting all business operations of VENDOR transacted under this AGREEMENT. VENDOR shall retain these books, records, and systems of account during the TERM and for three (3) years after the earlier of (i) the TERM or (ii) the date of termination. VENDOR shall permit OUSD, its agent, other representatives, or an independent auditor to audit, examine, and make excerpts, copies, and transcripts from all books and records, and to make audit(s) of all billing statements, invoices, records, and other data related to the SERVICES covered by this AGREEMENT. Audit(s) may be performed at any time, provided that OUSD shall give reasonable prior notice to VENDOR and shall conduct audit(s) during VENDOR'S normal business hours, unless VENDOR otherwise consents.
  26. **Non-Discrimination.** It is the policy of OUSD that, in connection with all work performed under legally binding agreements, there be no discrimination because of race, color, ancestry, national origin, religious creed, physical disability, medical condition, marital status, sexual orientation, gender, or age; therefore, VENDOR agrees to comply with applicable Federal and California laws including, but not limited to, the California Fair Employment and Housing Act beginning with Government Code section 12900 and Labor Code section 1735 and OUSD policy. In addition, VENDOR agrees to require like compliance by all its subcontractor (s). VENDOR shall not engage in unlawful discrimination in employment on the basis of actual or perceived: race, color, national origin, ancestry, religion, age, marital status, pregnancy, physical or mental disability, medical condition, veteran status, gender, sex, sexual orientation, or other legally protected class.
  27. **Drug-Free/Smoke Free Policy.** No drugs, alcohol, and/or smoking are allowed at any time in any buildings and/or grounds on OUSD property. No students, staff, visitors, VENDORS, or subcontractors are to use controlled substances, alcohol or tobacco on these sites.
  28. **Waiver.** No delay or omission by either PARTY in exercising any right under this AGREEMENT shall operate as a waiver of that or any other right or prevent a subsequent act from constituting a violation of this AGREEMENT.
  29. **Assignment.** The obligations of VENDOR under this AGREEMENT shall not be assigned by VENDOR without the express prior written consent of OUSD and any assignment without the express prior written consent of OUSD shall be null and void.

30. **No Rights in Third Parties.** This AGREEMENT does not create any rights in, or inure to the benefit of, any third party except as expressly provided herein.
31. **Litigation.** This AGREEMENT shall be deemed to be performed in Oakland, California and is governed by the laws of the State of California, but without resort to California's principles and laws regarding conflict of laws. The Alameda County Superior Court shall have jurisdiction over any litigation initiated to enforce or interpret this AGREEMENT.
32. **Incorporation of Recitals and Exhibits.** Any recitals and exhibits attached to this AGREEMENT are incorporated herein by reference. VENDOR agrees that to the extent any recital or document incorporated herein conflicts with any term or provision of this AGREEMENT, the terms and provisions of this AGREEMENT shall govern.
33. **Integration/Entire Agreement of Parties.** This AGREEMENT constitutes the entire agreement between the PARTIES and supersedes all prior discussions, negotiations, and agreements, whether oral or written. This AGREEMENT may be amended or modified only by a written instrument executed by both PARTIES.
34. **Severability.** If any term, condition, or provision of this AGREEMENT is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions will nevertheless continue in full force and effect, and shall not be affected, impaired or invalidated in any way.
35. **Provisions Required By Law Deemed Inserted.** Each and every provision of law and clause required by law to be inserted in this AGREEMENT shall be deemed to be inserted herein and this AGREEMENT shall be read and enforced as though it were included therein.
36. **Captions and Interpretations.** Paragraph headings in this AGREEMENT are used solely for convenience, and shall be wholly disregarded in the construction of this AGREEMENT. No provision of this AGREEMENT shall be interpreted for or against a PARTY because that PARTY or its legal representative drafted such provision, and this AGREEMENT shall be construed as if jointly prepared by the PARTIES.
37. **Calculation of Time.** For the purposes of this AGREEMENT, "days" refers to calendar days unless otherwise specified and "hours" refers to hours regardless of whether it is a work day, weekend, or holiday.
38. **Counterparts and Electronic Signature.** This AGREEMENT, and all amendments, addenda, and supplements to this AGREEMENT, may be executed in one or more counterparts, all of which shall constitute one and the same amendment. Any counterpart may be executed and delivered by facsimile or other electronic signature (including portable document format) by either PARTY and, notwithstanding any statute or regulations to the contrary (including, but not limited to, Government Code section 16.5 and the regulations

promulgated therefrom), the counterpart shall legally bind the signing PARTY and the receiving PARTY may rely on the receipt of such document so executed and delivered electronically or by facsimile as if the original had been received. Through its execution of this AGREEMENT, each PARTY waives the requirements and constraints on electronic signatures found in statute and regulations including, but not limited to, Government Code section 16.5 and the regulations promulgated therefrom.

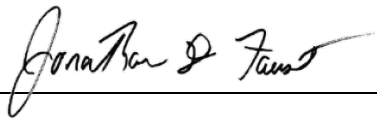
39. **W-9 Form.** If VENDOR is doing business with OUSD for the first time, VENDOR acknowledges that it must complete and return a signed W-9 form to OUSD.
40. **Agreement Publicly Posted.** This AGREEMENT, its contents, and all incorporated documents are public documents and will be made available by OUSD to the public online via the Internet.
41. **Signature Authority.**
  - a. Each PARTY has the full power and authority to enter into and perform this AGREEMENT, and the person(s) signing this AGREEMENT on behalf of each PARTY has been given the proper authority and empowered to enter into this AGREEMENT.
  - b. Notwithstanding subparagraph (a), VENDOR acknowledges, agrees, and understands (i) that only the Superintendent, and the Chiefs, Deputy Chiefs, and Executive Directors who have been delegated such authority, may validly sign contracts for OUSD and only under limited circumstances, and (ii) that all such contract still require ratification by the OUSD Governing Board. VENDOR agrees not to accept the signature of another other individual as having the proper authority to enter into this AGREEMENT on behalf of OUSD.
42. **Contract Contingent on Governing Board Approval.** The PARTIES acknowledge, agree, and understand that OUSD shall not be bound by the terms of this AGREEMENT unless and until it has been (i) formally approved by OUSD's Governing Board or (ii) validly and properly executed by the OUSD Superintendent, a Chief, or a Deputy Chief authorized by the Education Code or Board Policy, and no compensation shall be owed or made to VENDOR absent such formal approval or valid and proper execution.

REST OF PAGE INTENTIONALLY LEFT BLANK

IN WITNESS WHEREOF, the PARTIES hereto agree and execute this AGREEMENT and to be bound by its terms and conditions:

**VENDOR**

Name: Jonathan Faust

Signature: 

Position: Executive Vice President  
631-737-1133

Date: 04/09/2024

*One of the terms and conditions to which VENDOR specifically agrees by its signature is subparagraph (c) of Paragraph 3 (Compensation), which states that VENDOR acknowledges and agrees not to expect or demand compensation for any SERVICES performed prior to the PARTIES, particularly OUSD, validly and properly executing this AGREEMENT and shall not rely on verbal or written communication from any individual, other than the OUSD Superintendent or OUSD Legal Counsel, stating that OUSD has validly and properly executed this AGREEMENT.*

**OUSD**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Position: \_\_\_\_\_

Date: \_\_\_\_\_

- Board President (for approvals)
- Chief/Deputy Chief/Executive Director (for ratifications)

Name: Kyla Johnson-Trammell

Signature: \_\_\_\_\_

Position: Superintendent

Date: \_\_\_\_\_



SERVICES AGREEMENT  
EXHIBIT A

(Paragraph numbers in Exhibit A corresponds to the applicable Paragraph number in this Agreement.)

VENDOR: Lab-Aids, Inc.

**Services.** Describe the SERVICES VENDOR will provide: vendor will provide instructional materials which includes: student and teacher licenses to their online portal, printed and bound resources, digital and full-length biology texts, and material kits. They will also provide up to 8 professional learning sessions.

1. **Term.**

- a. This AGREEMENT shall start on the below Start Date. If no date is entered, then this AGREEMENT shall start on the latest of the dates on which each of the PARTIES signed this AGREEMENT.

**Start Date:** July 1, 2024

- b. Unless terminated earlier, this AGREEMENT shall end on the below End Date. If no date is entered, then this AGREEMENT shall end on the first June 30 after start date listed in subparagraph (a). If the dates set forth in this subparagraph and subparagraph (a) would cause this AGREEMENT to exceed the limits set forth in state law (e.g., Education Code section 17596), this AGREEMENT shall instead automatically end upon reaching said limit.

**End date:** June 30, 2027

2. **Compensation.**

- a. The basis for payment to VENDOR shall be:

Hourly Rate: \_\_\_\_\_ per hour

Daily Rate: \_\_\_\_\_ per day

Weekly Rate: \_\_\_\_\_ per week

Monthly Rate: \_\_\_\_\_ per month

Per Student Served Rate: \_\_\_\_\_ per student served

Performance/Deliverable Payments: Describe below the performance and/or deliverable(s) as well as the associated rate(s): Vendor pay schedule is attached.

- b. Over the TERM, the total compensation under this AGREEMENT shall not exceed the below amount. This sum includes (but is not limited to) compensation for the full performance of this AGREEMENT and all fees, costs, and expenses incurred by VENDOR including (but not limited to) labor, materials, taxes, profit, overhead, travel, insurance, permitted subcontractor costs, and other costs.

**Not-To-Exceed Amount:** \$2,178,527.53

13. **Legal Notices.**

OUSD

Site/Dept: Legal Department  
Address: 1011 Union Street, Site 946  
City, ST Zip: Oakland, CA 94607  
Phone: 510-879-5060  
Email: [ousdlegal@ousd.org](mailto:ousdlegal@ousd.org)

VENDOR

Name/Dept: LAB-AIDS, Inc.  
Address: 17 Colt Court  
City, ST Zip: Ronkonkoma, NY 11779  
Phone: (631) 615-4668  
Email: spaulsen@lab-aids.com

17. **Insurance.** OUSD has waived the following insurance requirements. Written confirmation of a waiver (e.g., email from OUSD Risk Management Officer) is attached hereto. Failure to attach such written confirmation voids any such waiver even if otherwise properly given.
- Commercial General Liability Insurance.* Waiver typically available by OUSD if no VENDOR INDIVIDUAL interacts or has contact with OUSD students (in-person or virtual) and the not-to-exceed amount is \$25,000 or less.
  - Workers' Compensation Insurance.* Waiver typically available by OUSD if VENDOR has no employees.
18. **Testing and Screening.** OUSD has waived the following testing and screening requirements. Written confirmation of a waiver (e.g., email from OUSD Risk Management Officer) is attached hereto. Failure to include such written confirmation voids any such waiver even if otherwise properly given.
- Tuberculosis Screening.* Waiver typically available by OUSD if VENDOR INDIVIDUALS will have no in-person contact with OUSD students.
  - Fingerprinting/Criminal Background Investigation.* Waiver typically available by OUSD if no VENDOR INDIVIDUAL interacts or has contact with OUSD students (in-person or virtual).
20. **Health and Safety Orders and Requirements; Site Closures.** If there is an Order or event in which school sites and/or District offices may be closed or otherwise inaccessible, would the SERVICES be able to continue?
- Yes, the SERVICES would be able to continue as described herein.
  - No, the SERVICES would not be able to continue.

**Summary of Instructional Materials Costs: Years 1-3, 2024-2027**

<b>Year</b>	<b>Summary of Materials to be Purchased</b>	<b>Costs</b>
<b>2024-25</b>	Lab-Aids portal Teacher Licenses Printed and bound teacher resources Lab-Aids portal Student Licenses Digital and print full-length Biology texts Material Kits	<b>\$958,884.85</b>
<b>2025-26</b>	Lab-Aids material Kits refills	<b>\$69,823.78</b>
<b>2026-27</b>	Lab-Aids material Kits refills	<b>\$69,823.78</b>
<b>TBD</b>	Lab-Aids material Kits refills	<b>\$69,823.78</b>
<b>TBD</b>	Lab-Aids material Kits refills	<b>\$69,823.78</b>
<b>TBD</b>	Lab-Aids material Kits refills	<b>\$69,823.78</b>
<b>TBD</b>	Lab-Aids material Kits refills	<b>\$69,823.78</b>
	<b>TOTAL =</b>	<b>\$1,377,827.53</b>

*\*This assumes that all consumable materials are used by every teacher each year and needs to be completely refurbished; annual cost will most likely be lower*

**Summary Table - Professional Learning: Years 1-3, 2024-2027**

<b>Year</b>	<b>Summary of Professional Learning Offerings</b>	<b>Costs</b>
<b>2024-25</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days <i>Spring 2024 Chemistry Pilot</i>	<b>\$155,900.00</b> <b>(\$14,400.00</b> <b>direct cost</b> <b>from</b> <b>Lab-Aids)</b>
<b>2025-26</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days <i>Curriculum training for trainers PD</i>	<b>\$154,900.00</b>
<b>2026-27</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series	<b>\$109,900.00</b>

	September & January PD Days <i>Curriculum training for trainers PD</i>	
<b>TBD</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days Science Teacher Lead/Coaching Collaborative	<b>\$95,000.00</b>
<b>TBD</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days Science Teacher Lead/Coaching Collaborative	<b>\$95,000.00</b>
<b>TBD</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days Science Teacher Lead/Coaching Collaborative	<b>\$95,000.00</b>
<b>TBD</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days Science Teacher Lead/Coaching Collaborative	<b>\$95,000.00</b>
	<b>TOTAL =</b>	<b>\$800,700.00</b>



# **Attachment A: Biology Curriculum Proposal**

Oakland Unified School District  
March 2024

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## Executive Summary

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In September 2013, California adopted the Next Generation Science Standards (NGSS). The new science standards represent a major shift in science instruction that focuses on scientific sense-making, language used, and the scientific and engineering practices. These practices overlap with Common Core (CCSS) by placing significance on developing explanations and argumentation from evidence. In support, the OUSD Science Department has been actively preparing teachers since 2012 to make the necessary shifts in their classrooms to address the standards and the upcoming state test. With the California Science Test (CAST) becoming operational in Spring 2019, it is vital to continually support OUSD students with high quality standards aligned science curriculum and instructional materials.

Options for externally evaluated, NGSS aligned, and high school level science curriculum is still limited. Review of high school biology curriculum began in Spring 2019, with 18 teachers participating in field-tests to help develop some of the programs that would ultimately be published and made as options for piloting. From those tests, teacher surveys, and additional reviews in spring 2023, two options were selected for piloting. 10 piloting teachers came from 7 different high schools and represented a spectrum of teaching experience, and multiple class load configurations. Teachers provided feedback on five features of each program: (1) NGSS Alignment; (2) Language, Literacy, and Common Core Connection; (3) Student Materials and Equity; (4) Assessment; and (5) Teacher Materials and Usability. ***Science and Global Issues: Biology (Lab-Aids)*** was ranked highest in nearly all categories. Overall, 100% of the pilot teachers recommended we move forward with adopting Lab-Aids for HS Biology in OUSD. The adoption of Lab-Aids would provide students the high quality standards-aligned curriculum they deserve and need to develop a scientific understanding of our world in order to address personal, community, and global issues.

## Background

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In 2007, OUSD adopted the textbook, *Biology* by S. Nowicki (2008, *McDougal Littell*). The textbook was aligned to the 1998 standards. In 2013, California adopted the NGSS. NGSS requires a fundamental shift in the purpose of science education from knowing facts to being able to understand and explain the world around you. The NGSS has been thoughtfully created to integrate science disciplines as well as other content areas. The NGSS was adopted after CCSS and makes explicit connections to CCSS as well as the CA-ELD Standards. Both NGSS and the History and Social Science California Frameworks were adopted in 2016. Both frameworks address the Environmental Principles and Concept Standards (EPCs) which focus on environmental and climate change literacy.

In 2014, the OUSD Science Department joined West Ed's K-12 Alliance statewide NGSS Early Implementer Initiative. In partnership with this initiative, the Science Department along with OUSD science teachers began the development of the OUSD NGSS-aligned curriculum for grades 6, 7, 8, and Bio9. *Reference Appendix A: OUSD Secondary Science NGSS Implementation Plan*. The development and implementation of this transitional curriculum provided a critical professional learning opportunity to unpack the new standards. Science teachers and Science Teacher Leaders (STLs) were supported with additional professional development (PD) through summer institutes, lesson study, 2nd Wednesday PDs. *Reference Appendix B: Secondary Science Instructional Materials*. One of the goals for the curriculum development project was to provide equity, which is highlighted in both the NGSS and the OUSD Values.

The theory of action around the curriculum development was that if teachers were provided training and instructional materials that are aligned to the developed curriculum, teachers would have more time to focus on supporting their students with the instructional shifts necessary to meet the NGSS. Materials were again given to sites to maintain and the curriculum was and is still available on Google Drive. The OUSD Science Department opened up the curriculum online for any science teacher to use regardless if they are in OUSD. Many districts and teachers around the country and in some international schools use the OUSD NGSS-aligned curriculum.

Support for the development and implementation of this transitional NGSS-aligned curriculum came from the Bechtel Foundation. Funding from the Bechtel Foundation decreased each year and eventually ended at the end of the 2016-17 school year. Parts of the curriculum are still used by a handful of teachers in OUSD even though the curriculum is incomplete and there are not enough resources to maintain the online and instructional materials. This also means there is not a supported, updated, or consistent curriculum available for science teachers to use. The ongoing PD training that occurred during the year called 2nd Wednesday PDs were canceled by the district for two years but has since resumed. Training teachers is vital to understanding the new standards and the implementation of a curriculum. This is especially true with a high



teacher turnover rate like the one in OUSD. In the 2018 OUSD All Staff Retention Survey, the third reason why STEM teachers leave OUSD is the lack of adequate supplies and resources. Staff turnover and instructional materials availability continues to be a challenge in providing all students consistent access to high quality science learning.

## Curriculum Selection Process

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Review of high school biology curriculum began in Spring 2019, with a number of teachers participating in field-tests to help develop some of the programs that would ultimately be published and made as options for piloting. In 2019, and again in 2022, science teachers were surveyed around needs. The 2022 results showed that teachers prioritized materials—both physical and digital (92%)—and curriculum (82%). The survey also revealed that most of teachers’ planning time was spent gathering and preparing materials, with nearly half (~46%) spending \$200 or more of their own money each year. *Reference Appendix C: Teacher Need Survey.* With most teachers wanting something, it was a matter of finding a curriculum that: 1) provides materials for labs and investigations; 2) outlined coherent sequencing of full units with guidance; and 3) was supported with training from actual educators. *Reference Appendix D - Curriculum Review and Feedback Rubric.* After reviewing the few options that were available, and interviewing teachers who had participated in field testing, we landed on two viable programs for piloting: ***Understanding for Life (BSCS)*** and ***Science and Global Issues: Biology (Lab-Aids)***.

## Pilot Process

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Pilot interest was gathered in the 2022 teacher survey, and those teachers were invited to participate. In spring 2023, the updated pilot application was shared with all biology teachers. *Reference Appendix E: Biology Curriculum Pilot - Overview.* A wide variety of teacher voices on the pilot team was needed. Every teacher who applied was able to pilot, no one was turned away. There were a total of 10 high school science teachers that participated in the pilot and selection process. The pilot team had a spectrum of teaching experience, with some having multiple class load configurations (SpED, Newcomer/ELL support, additional science classes) *Reference Appendix F: Pilot Teacher Roster.*

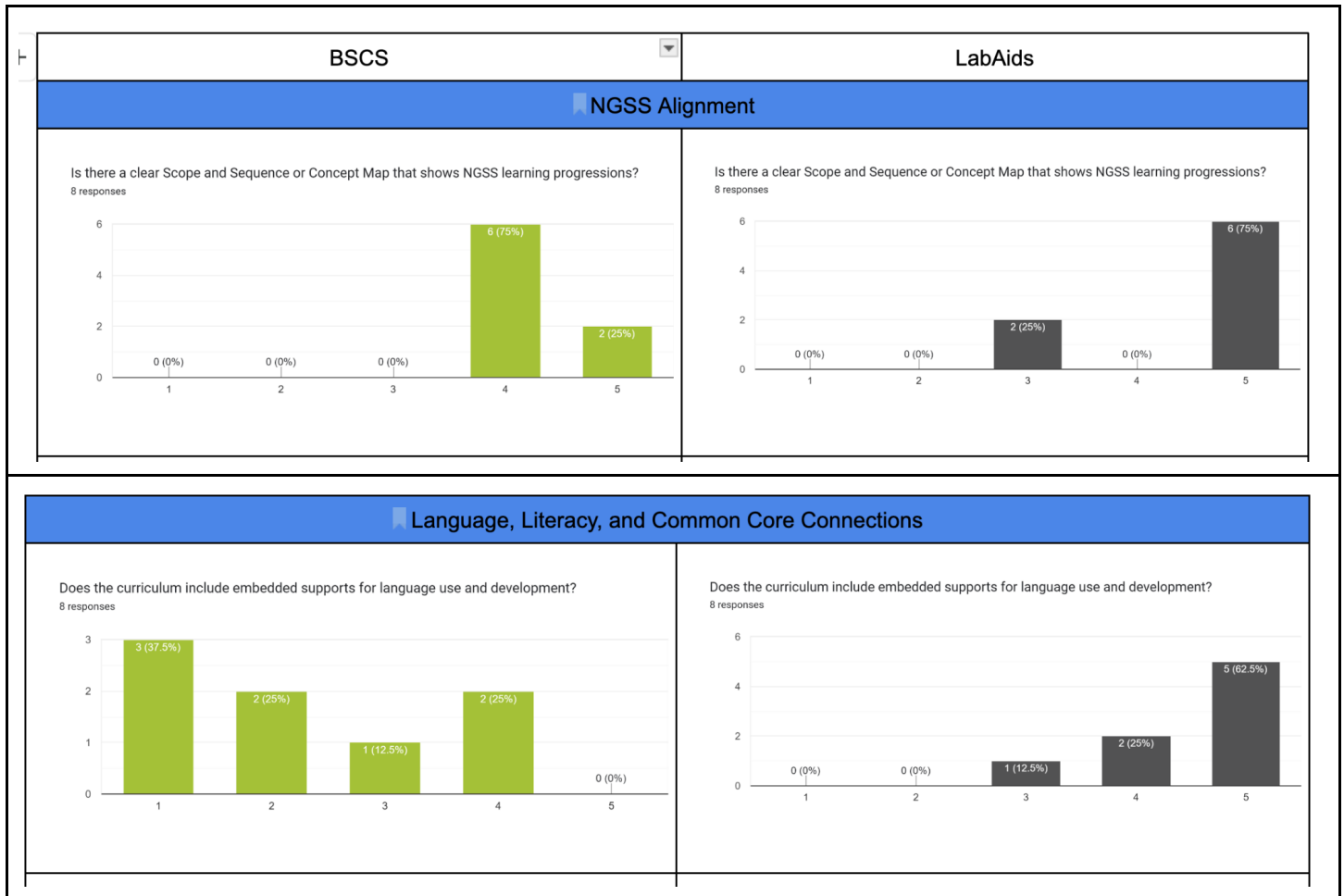
Pilot teachers were asked to implement one unit from BSCS and another unit from Lab-Aids in the fall of 2023 (because of shifts in the timing of the Healthy Teens unit and other delays, teachers continued into the winter 2024). Each publisher developed and sequenced their units differently, but we designed a scope and sequence around HS NGSS Life Science Standards 1 - 4. *Reference Appendix G: Bio Pilot Scope/Sequence.* While there was some overlap with focal standards within the LS1, LS2, and LS4 strands of the selected pilot units, the arrangement and approach from each program allowed teachers to work from both with limited redundancy—BSCS has students explore key concepts on a more microscopic scale, with Lab-Aids supporting them to think about implications on a macro or global scale. Having additional materials from both programs also allowed teachers to continue using the remaining units from BSCS and one more unit from Lab-Aids in the spring as we deliberated.

To prepare for implementation, pilot teachers attended an initial training in the summer and additional training in the Fall. *Reference Appendix H: Sample Agenda.* The HS Science Coordinator also conducted classroom observations and 1:1 check-ins with teachers. Online and instructional materials were provided by both publishers for the pilot teachers to utilize. The OUSD Data and Technology Departments worked in collaboration with both publishers to ensure online resources were available to students.

## Selection Process

Teachers named areas of strength and concerns for both curricula that they and their students experienced throughout the pilot. During the official deliberation process, teachers reviewed data from the feedback surveys that focused on: (1) NGSS Alignment; (2) Language, Literacy, and Common Core Connection; (3) Student Materials and Equity; (4) Assessment; and (5) Teacher Materials and Usability. Figure 1 shows responses to sample questions within each section. *Reference Appendix I: Bio Pilot Data Synthesis* for full results.

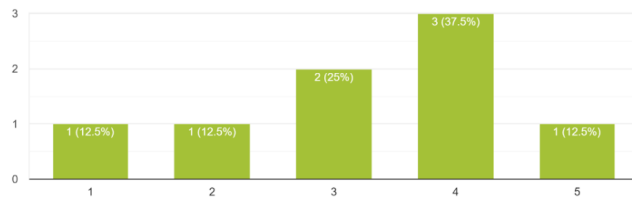
**Figure 1: Teacher Feedback Survey Samples**



## Student Materials and Equity

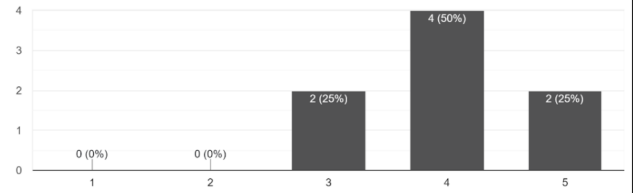
Do the learning experiences hook into students' prior knowledge?

8 responses



Do the learning experiences hook into students' prior knowledge?

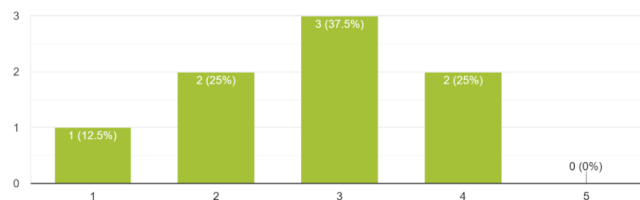
8 responses



## Assessments

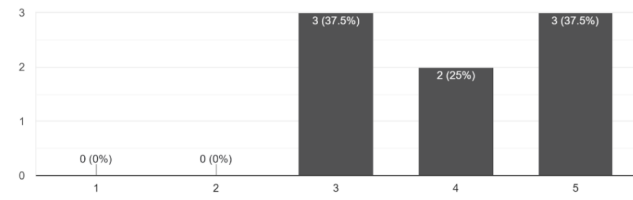
Do the assessments (formative and summative) provide information about both conceptual understanding and skills (e.g. Science and Engineering Practices)?

8 responses



Do the assessments (formative and summative) provide information about both conceptual understanding and skills (e.g. Science and Engineering Practices)?

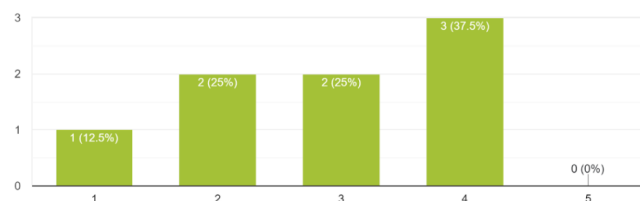
8 responses



## Teacher Materials and Usability

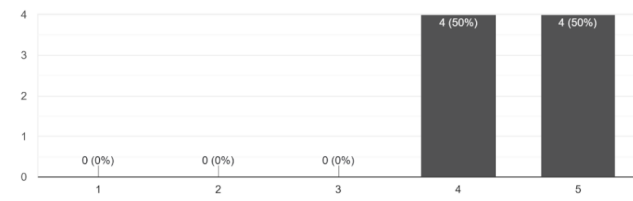
Are the teacher materials (print and digital) user-friendly and easy to navigate?

8 responses



Are the teacher materials (print and digital) user-friendly and easy to navigate?

8 responses



Overall, on a 5-point scale, Lab-Aids had a mean rating of 4.30. It was also rated higher for each of the factors being examined (Table 1). These higher scores reflect the notable differences between materials offered to students for hands-on activities, ways readings and text are broken down, integrated translation and text-to-speech tools within the digital resources, assessment banks with supporting rubrics, and teacher guides. Many of these features came up in previous surveys around teacher needs.

**Table 1: Mean rating for each survey factored on 5-point scale**

	Overall	Factors				
		NGSS Alignment	Language, Literacy, and Common Core Connection	Student Materials and Equity	Assessment	Teacher Materials and Usability
<b>BSCS</b>	<b>2.95</b>	<b>3.50</b>	<b>3.11</b>	<b>2.57</b>	<b>2.80</b>	<b>2.93</b>
<b>Lab-Aids</b>	<b>4.30</b>	<b>4.52</b>	<b>4.31</b>	<b>4.16</b>	<b>4.38</b>	<b>4.21</b>

Students were also surveyed after each unit to get their feedback—that information is still being collected and synthesized. *Reference Appendix J: Student Survey.* Some initial comments include:

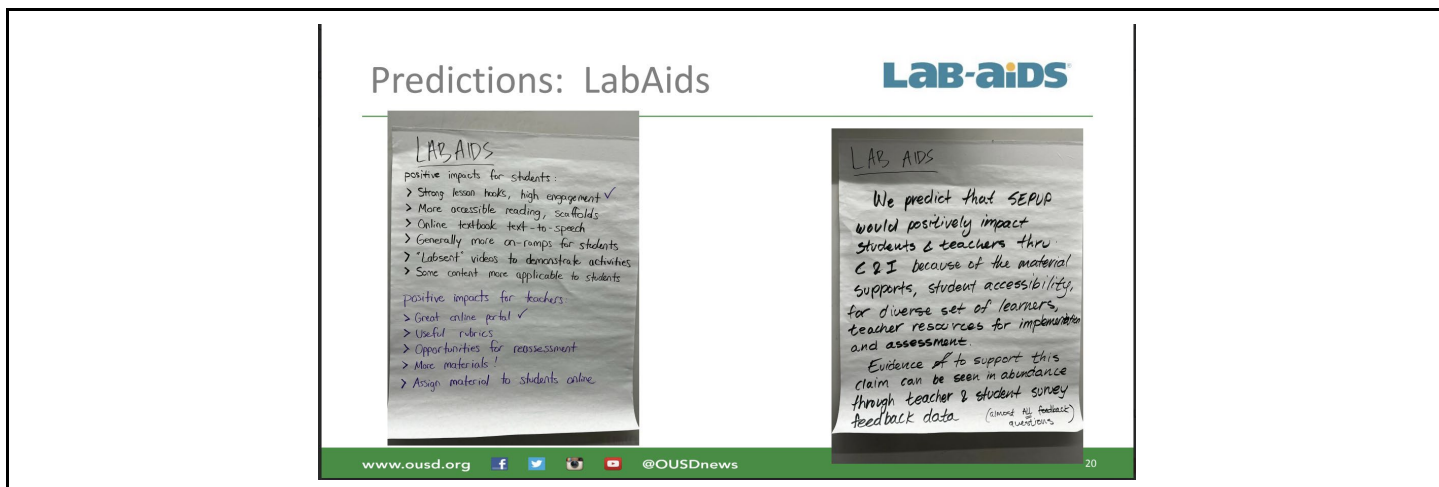
- “I think we are learning more...I like the labs”
- “The book is useful and easy to learn from. It’s a good reference. We didn’ really have a textbook before we started using this.”
- “I like how the book is organized. It’s kind of the same as books in other classes, but also the sections are easier to find.”
- “We had materials to do activities that represented [and modeled] things...like we had to show how grasshoppers could survive with these hexagon pieces and cups.”
- “We have a lot of writing...”

After reviewing some of those comments and the full set of survey data, the deliberation team articulated predictions around how each option would positively impact teachers and students. Their summaries again spoke to accessibility for students and supports for teachers (Figure 2):

**Figure 2: Deliberation Team Predictions Around Curriculum Impact on Teachers and Students:**

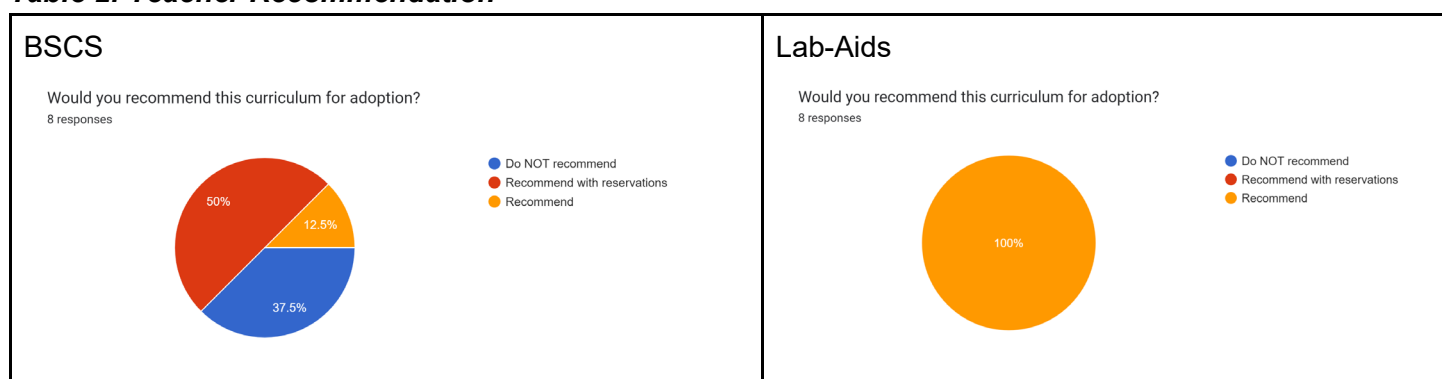
“Impact on teachers” Predictions: BSCS

“Impact on teachers” Predictions: Lab-Aids



As part of the survey, teachers provided their unofficial recommendation which would be formalized during the deliberation meeting (Table 2). All of those who responded and were present at the meeting would recommend Lab-Aids as the official curriculum for high school Biology:

**Table 2: Teacher Recommendation**



The following are quotes from pilot teachers.

- *“This was a much better curriculum for my students. The texts they were reading were still challenging them but they weren’t getting too lost in the science vocabulary. I saw my kids engage more with the activities provided in the curriculum like the sorting activities.”*
- *“This was the curriculum my colleagues were most excited about - specifically because there were so many labs incorporated into the curriculum. I believe the “Labsent” videos and the labs are a huge asset to curriculum. I really liked the literacy supports provided in the student textbooks.”*
- *The curriculum is more developed (farther along in offering alternatives and supports for diverse learners). There are more digital and analog tools and resources in support of student learning than in BSCS...*

## Final Recommendation

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Overall, 100% of the pilot teachers represented on the survey and during deliberation recommended adopting Lab-Aids. Given this feedback, the OUSD Science Department urges the Board of Education to approve the adoption of ***Science and Global Issues: Biology (Lab-Aids)*** for high school Biology.

The adoption of Lab-Aids would provide all high school students in Oakland the high quality standards-aligned curriculum they deserve. NGSS has been in place for over 10 years now, which requires shifts in the way we teach and learn science. Lab-Aids 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.

Lab-Aids offers an assessment system that can provide data around the 3-dimensional NGSS learning and can be utilized by students, teachers, school sites, and at the district level. Rubrics aligned to those practices, and modified item-specific scoring guides for formative assessments throughout units, are also provided so teachers are using the same evaluative criteria. In addition to allowing us to develop aligned interim assessments, the platform helps to implement assessments that can prepare students for the California Science Test (CAST).

The program on which Lab-Aids built (SEPUP), has a proven record of being highly effective for students and teachers. Lab-Aids is similar to the FOSS curriculum that is being utilized in OUSD at the elementary and middle school levels. Expanding into high school with a similar curriculum will provide a coherent science program for the students and teachers in Oakland.

## Implementation Plan

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Results of the pilot process will be shared with teachers, middle school principals, the SpEd Department, and the ELLMA Department. More outreach needs to happen so that everyone in the community has a clear understanding of how the implementation of this science program will shift science teaching and learning for high school students and teachers in OUSD. Site team and community engagements are planned to take place during the remainder of the 2023-24 school year.

Teachers will receive foundational training in May of 2024 and again at the Standards and Equity Institute in July/August to ensure current teachers and new hires have access. During the institutes, teachers will develop an understanding around the curriculum design, receive teacher materials for their first unit, and practice teaching and planning for a lesson. Ongoing training will take place throughout the year during 2nd Wednesday Professional Developments, Buy Back Days, and release days. These professional development



sessions will focus on unpacking the curriculum and analyzing student work. Online resources are built into the program additional support to teachers.

Science Teacher Leaders (STLs) will play a pivotal role in sharing information about the new curriculum. The goal is for the leads to eventually transition into a coaching collaborative to help teams revise instruction, focus on student outcomes, promote a culture of collaboration, and commitment to data analysis. STLs will receive additional training and eventual “training for trainers” as we shift our PL and PD.

Unlike our elementary and middle school science programs, the Lab-Aids materials will be sent to school sites directly, with the warehouse being used to store some extra materials. We will work with the current team that oversees disbursement and refurbishment to utilize the online system for eventual material tracking and facilitating refills during the future years of implementation.

## Fiscal impact

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When looking at implementation, there are both one-time costs for adoption materials (kits, books, teacher materials) and annual refill expenditures. Lab-Aids also provides professional learning. We will use their trainers exclusively during the initial years of implementation. As our own teachers and leads become trainers, we will utilize their PL less. The complete purchase of Lab-Aids science instructional materials and professional learning for high school biology over 7 years is estimated to be **\$2,178,527.53**. This includes the expected annual cost to refurbish Lab-Aids kits. The refurbishment of consumable materials and purchase of live organisms each year will not exceed \$69,823.78 (Table 3). This estimate is based on the need to refill all consumable items each year, and will most likely be much lower. An evaluation from other districts utilizing the program shows it being closer to 50-75% of that annual cost.

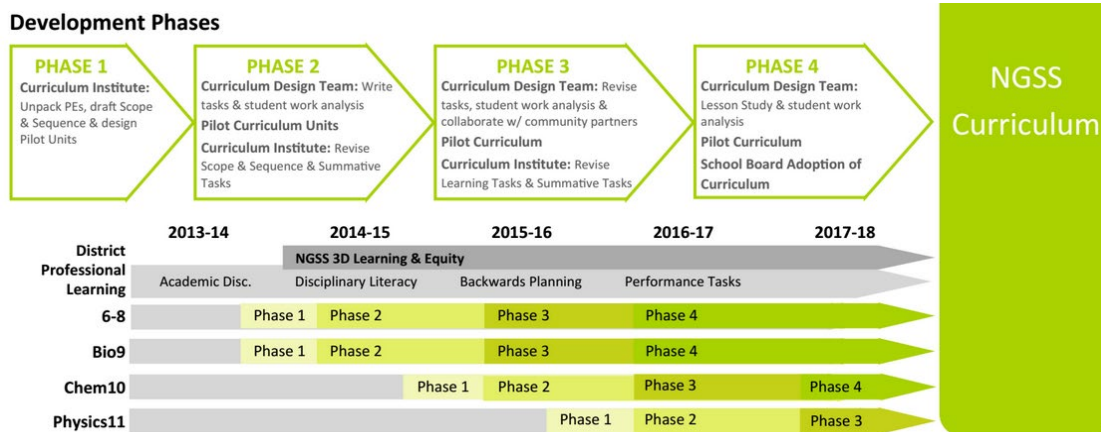
**Table 3: Adoption of Lab-Aids**

One-time cost:	\$958, 884.85
Annual cost of consumables	\$69,823.78
Professional learning	\$800,700.00
Cost of 7-year adoption	<b>\$2,178,527.53</b>

# **Appendices: Biology Curriculum Proposal**

# OUSD Secondary Science NGSS Implementation Plan

In September 2013, California adopted the Next Generation Science Standards (NGSS). The new science standards, represent a major shift in science instruction that focuses on scientific sense-making, language use, and scientific and engineering practices. These practices overlap with Common Core (CCSS) by placing significance on developing explanations and argumentation from evidence. In support, the OUSD Science Department has been actively preparing teachers to engage and utilize NGSS to make the necessary shifts in their classrooms since the adoption.



In order to implement a system-wide plan for this transition in OUSD, the Science Department has focused on three major areas of work:

## 1. The development of curriculum and instructional resources that align to NGSS

Teams of experienced teachers and science specialists work together to create a relevant, authentic, and engaging integrated NGSS curriculum. Summative tasks and formative assessments are embedded in the curriculum. All curriculum is accessible online and is linked to teaching resources. Essential equipment/materials are provided to sites using the curriculum. All OUSD teachers using the curriculum and receiving materials must share resources, samples of student work, and provide ongoing feedback for revisions.

## 2. Foster teacher expertise in content, skills, and practices to align with NGSS

The professional learning calendar begins in August with the Curriculum Institute. During this week long institute, teachers work to backwards designed 3D-NGSS-aligned lessons to build students' skills and content knowledge on a path to success on the OUSD summative assessments. Participants gained valuable skills and knowledge of NGSS implementation. Skills and knowledge building of NGSS implementation are continued throughout the year with monthly 2nd Wednesday PDs and two Buy Back Days.

## 3. Build science instructional leadership for science teacher leaders

Science teacher leaders participate in monthly workshops to develop leadership skills around NGSS advocacy and implementation. Through a grant and application process, some of the science teacher leaders participate in lesson study. During the summer, lesson study teachers participate in a week long institute to strengthen their pedagogical and content knowledge in implementing NGSS. For two cycles during the year, lesson study teachers collaboratively plan 3D-NGSS-aligned lessons, implement those lessons and reflect on student learning.



## Secondary Science Instructional Materials

This guide details the implementation of OUSD’s Secondary Science Program with regards to instructional materials. This guide includes the Secondary Science Curriculum and Benchmarks for teachers, support staff, along with principals. Please take a few minutes to carefully read this document so that you become familiar with the details of these resources. Additional information and resources can be found at the Science in Oakland website at <http://science.ousd.org>.

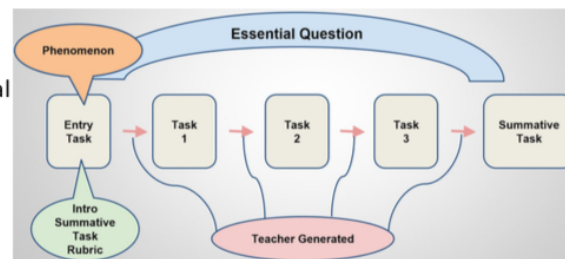
Sections:

- [Curriculum & Benchmarks](#)
- [Textbooks](#)
- [Materials](#)

### OUSD NGSS-aligned Secondary Curriculum & Benchmarks

This curriculum & benchmarks represents concurrent shifts to the Next Generation Science Standards (NGSS), a concentration on disciplinary literacy skills outlined in the Common Core State Standards (CCSS), a focus on collaborative learning and other crucial social and emotional skills, problem and project-based learning, and content relevant to Oakland youth.

Units are backwards mapped from the summative task (see side figure). Units are driven by an essential question and anchor phenomenon. The unit ends with a summative task that captures 3-dimensional learning, collaboration and literacy skills. Students revisit the [curriculum features](#) (anchor phenomenon, anchor text, and unit rubric) throughout the unit.



The OUSD NGSS-aligned curriculum and benchmarks are located on [OUSD Science website](#). The Scope and Sequence should be used as the main navigation page for the curriculum as it will be updated regularly as tasks and resources are finalized and shared for implementation. Please reference OUSD Secondary Science NGSS Curriculum Instructions [document](#) for further explanation on nomenclature, organization, and features of the curriculum.

For courses that do not have a curriculum provided, teams of teachers are encouraged to look at the standards to develop their own scope and sequence. Reference these [resources](#).

### Curriculum Adoption

OUSD Secondary Science is not currently adopting a middle school or high school curriculum. We do not have funding or infrastructure in place to support a curriculum other than the district created curriculum we already have. Sites may purchase curriculum to complement the OUSD curriculum. Sites will be informed of when there is a curriculum pilot opportunity.

## Textbooks

Textbooks are supplemental to the OUSD NGSS-aligned Curriculum. The OUSD NGSS-aligned Curriculum is available on the [OUSD Science website](#).

### For Middle School

The California NGSS Integrated Model for Middle Schools requires students learn Earth Science, Life Science, Physical Science, and Engineering every year for grades 6th, 7th, and 8th. CPO's *Focus on Earth, Life, and Physical Science* was adopted in 2007 as the middle school science curriculum for grades 6th-8th (Earth Science = 6th, Life Science = 7th, and Physical = 8th). As we transition to NGSS and the California NGSS Integrated Model, students and teachers will need access to all three textbooks throughout a school year. Sites can rotate textbooks and materials within a site when appropriate. For example, 7th grade might need to read a section from the the Earth Science book when 6th grade needs a section from the Life Science book. 7th and 8th grade might need to read two different sections from the Physical Science book at the same time. To avoid a double demand on a textbook, teachers must coordinate their curriculum implementation schedules.

In regards to the Williams Act, there is no updated information regarding science textbooks. However, we are transitioning to NGSS and there should be enough textbooks to have a class set of each textbook in each classroom teaching science. In addition to a class set, teachers may elect to have students take a textbook home. In that case, there needs to be enough textbooks for each student to take home.

### For High School

The California NGSS Course Model selected for OUSD High Schools should be the one that best supports the science learning and future opportunities of our students and effectively addresses the criteria and constraints: A-G Course Approval, College & Career Readiness, OUSD Graduation Requirements, Current OUSD High School Science Course Sequences, Teacher Credentialing, Textbooks, Next Generation Science Standards (NGSS) and California Science Assessment (CAST) and California Alternative Assessment (CAA).

Based on a thoughtful analysis of various NGSS High School Course Models and the California Science Framework, the OUSD Science Department recommends a **NGSS 3 Course Model with Earth and Space Science (ESS) and Engineering, Technology, & Applications of Science (ETS) Standards integrated into the 3 courses.**

9th Grade	10th Grade	11th Grade	12th Grade
Biology <sub>ESS+ETS</sub>	Chemistry <sub>ESS+ETS</sub>	Physics <sub>ESS+ETS</sub>	Student or Pathway Choice

The three course model combines all high school performance expectations (PEs) into three courses. The ESS and ETS standards must be integrated into the traditional high school disciplines of Biology, Chemistry, and Physics. Given the following textbooks were adopted in April 2007 for the various high school courses, supplementary materials will need to be obtain in order to integrate ESS and ETS standards into the 3-course model.

Textbooks and teacher materials can be found at each school site. The links below will take you to the publisher websites for each book.

Course	Title	Author	Publisher	ISBN
Biology	<i>Biology</i>	Nowicki	Houghton Mifflin (McDougal)	0618725105
Biotechnology	<i>Biotechnology: Science for a New Millennium</i>	Daugherty	Paradigm Publishing	0763822825
Chemistry	<i>Chemistry California Edition</i>	Wilbraham	Pearson Prentice Hall	0132013053
Conceptual Physics*	<i>Physics a First Course</i>	Hsu	CPO Science	1588921417

Earth Science	<i>Earth Science California Edition</i>	Tarbuck	Pearson Prentice Hall	131667556
Environmental Science*	<i>Environmental Science - A Study of Interrelationships (Hardcover)</i>	Enger	McGraw Hill	0073204803
Geology	<i>Earth Science (11th Ed)</i>	Tarbuck	Pearson Prentice Hall	013197212X
Physics*	<i>Conceptual Physics*</i>	Hewitt	Pearson Prentice Hall	131663011
Physiology	<i>Essentials of Anatomy and Physiology (HS binding)</i>	Martini	Pearson Prentice Hall	0805373039
AP Biology	<i>Biology</i>	Campbell	Pearson Prentice Hall	805367772
AP Chemistry	<i>Chemistry the Central Science</i>	Brown	Pearson Prentice Hall	0131937197
AP Env. Science	<i>Living in the Environment</i>	Miller	Thomson Brooks Cole	0495015989
AP Physics	<i>Physics</i>	Cutnell	Peoples Education	0471663157

\*note that Physics is coincidentally using a book called *Conceptual Physics*, while Conceptual Physics is using a different book.

AP Courses need to adopt new textbooks and support materials in order to be in compliance. Students and teachers need daily access to a college-level textbook and support materials that have been published within the last 10 years.

## Materials:

### Middle Schools

During the 2007 OUSD Middle Schools adoption of CPO, supplementary materials and equipment were provided by CPO.

- Reference this [textbook and kit list](#) for sites who received materials and equipment in 2007.
- Reference this [folder](#) for the list of items in a CPO kit.

Middle school that were in existence in 2007 received CPO materials from CPO. In 2017, the OUSD Science Department purchased CPO kits for middle school that opened after 2007 and for sites that indicated they needed materials using the NGSS Curriculum Materials Site Inventory sheet (linked below).

### High Schools

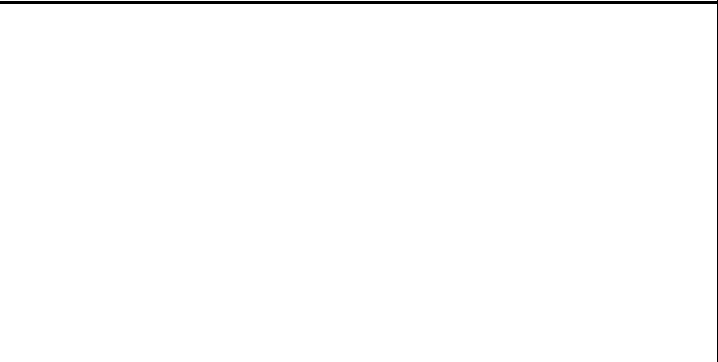
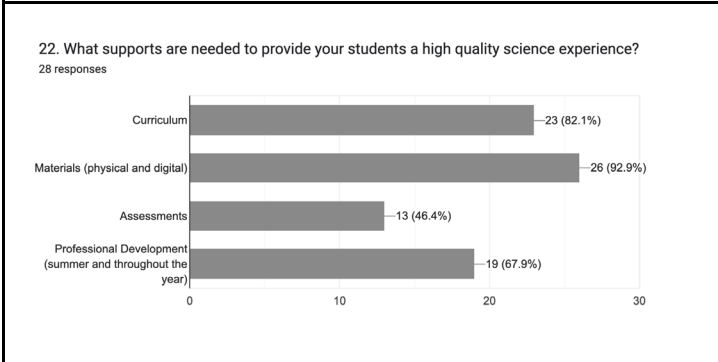
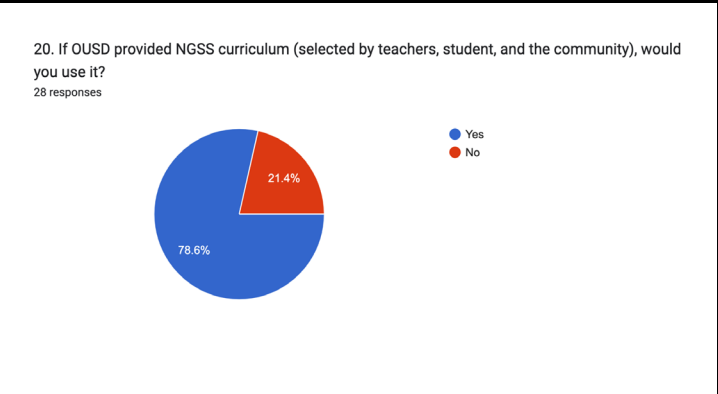
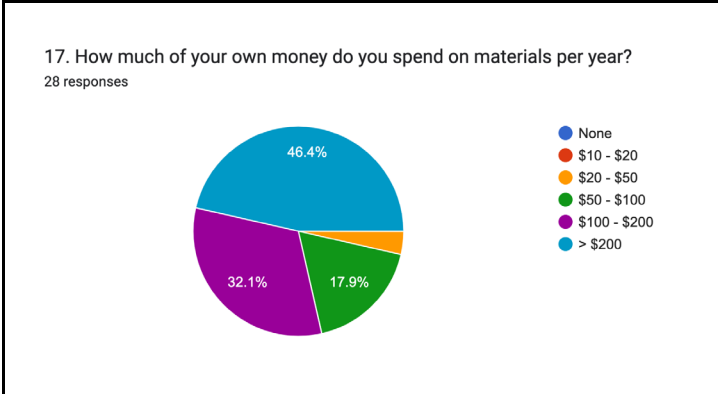
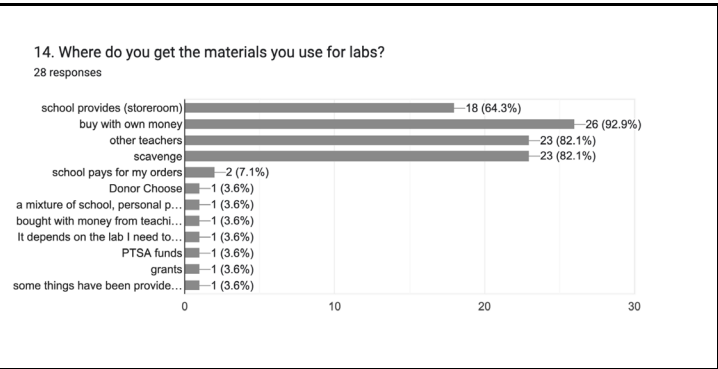
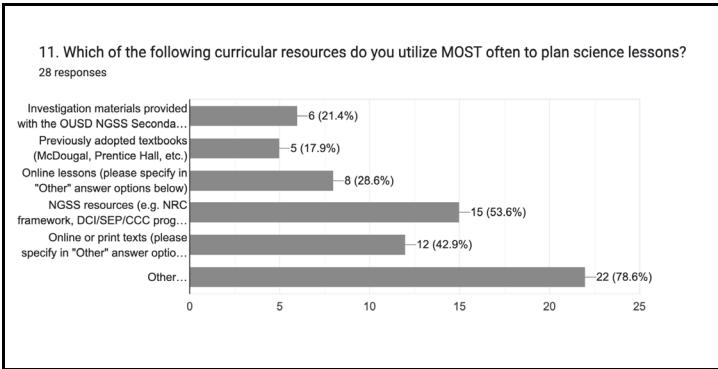
High schools historically have purchased their own materials and equipment based on recommendations from adopted textbooks.

### Materials the District Provided

Through grant funding, OUSD has develop curriculum that is aligned to the Next Generation Science Standards (NGSS). To support the implementation of this curriculum, the OUSD Secondary Science Department has purchased and given sites materials/equipment. Supplying sites with materials began in 2014-15 for grades 6-9 and only to sites piloting the curriculum. Materials were returned at the end of the school year. However, in 2015-16, materials were given to all middle schools to keep. High schools piloting the Bio9 curriculum also given materials to keep. At the end of 2015-16 school year, OUSD worked with Science Teacher Leaders to take inventory of materials/equipment at each site. Reference this [protocol](#) for how Science Teacher Leaders engaged in completing their [NGSS Curriculum Materials Site Inventory sheet](#). These inventory sheets were used to purchase materials for the following year. Essential materials/equipment to support the OUSD NGSS-aligned Curriculum were delivered to sites at the beginning of 2016-17 by the OUSD Secondary Science Department. Additional materials and equipment were provided throughout 2016-17 as curriculum was revised and developed.



Appendix C: [Teacher Need Survey Results](#) (summary of responses to key questions provided below)



<b>Bio NGSS Curriculum Review Feedback Rubric</b> <i>(provided to teachers via GoogleForms)</i>	
Thank you for participating in the OUSD Bio NGSS Curriculum Review process. Your feedback will inform the process for curriculum selection with the goal of district-wide implementation in the 2024-25 school year.	
Name:	Name of School:
Years of Teaching Experience:	Current Grade/Assignment:
<p><b>Curriculum:</b> <i>(Circle one)</i></p> <ul style="list-style-type: none"> <li>● <i>Understanding for Life (BSCS)</i></li> <li>● <i>Science and Global Issues (Lab-Aids)</i></li> </ul>	

NGSS Alignment	1 Not at all	2 Not very	3 Neutral	4 Some-what	5 Very Much
Is there a clear Scope and Sequence or Concept Map that shows NGSS learning progressions?					
Does the curriculum provide experiences with phenomena that support deep conceptual learning?					
Does the curriculum have students discussing open-ended and driving questions?					
Does the curriculum provide opportunities for students to <b>plan and carry out investigations</b> ?					
Does the curriculum provide opportunities for students to <b>analyze and interpret data</b> ?					
Are Science & Engineering Practices (SEPs) , Disciplinary Core Ideas (DCIs), and Crosscutting Concepts (CCCs) woven together so that student tasks reflect the ways that scientists and other STEM professionals do and think about science?					

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 <b>language use and development</b> ?					

Are there frequent opportunities to <b>write</b> 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 have students gather multiple forms of <b>evidence to generate explanations and claims</b> ?					
Does the curriculum include frequent and multi-modal opportunities for students to engage in discussion and <b>argumentation</b> to make sense of data and deepen their understanding?					
Will students <b>read</b> complex text to deepen their understanding?					
Do the reading materials allow students to build on ideas from the activities and hands-on experiences?					
Does the curriculum provide support for <b>mathematical thinking &amp; data analysis</b> ?					

<b>Student Materials and Equity</b>	<b>1</b> Not at all	<b>2</b> Not very	<b>3</b> Neutral	<b>4</b> Some-what	<b>5</b> 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 learning experiences allow for and support student access to information and expression of understanding in multiple ways?					
Do the materials reflect the diversity of our school communities?					
Are student materials available in languages other than English?					
Are there multiple entry points in which students can engage with the materials, (i.e. are there videos, visual organizers, or UDL adaptations that support student learning)?					
Does the curriculum include guidance for scaffolds to support students who may need them to access the content?					
Does the curriculum include tools and other materials representative of Biology and Life Science fields that support hands-on experiences?					
Does the curriculum include traditional tools of science (e.g. measuring devices) and common objects so that students can see opportunities for science in their everyday lives?					

<b>Assessment</b>	<b>1</b> Not at all	<b>2</b> Not very	<b>3</b> Neutral	<b>4</b> Some-what	<b>5</b> Very Much
Do the assessments (formative and summative) provide information about both conceptual understanding and skills (e.g. Science and Engineering Practices)?					
Is there guidance around the types of questions to pose for formative assessments and checks for understanding?					
Does the curriculum provide guidance for how to use the assessment data?					
Are the summative assessments easily administered?					
Are there provided rubrics to help evaluate key skills and understanding and provide feedback to students?					

<b>Teacher Materials and Usability</b>	<b>1</b> Not at all	<b>2</b> Not very	<b>3</b> Neutral	<b>4</b> Some-what	<b>5</b> Very Much
Are the teacher materials (print and digital) 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?					

<b>Overall</b>	Do not recommend	Recommend with reservations	Recommend
Would you recommend this curriculum for adoption?			

**Comments:**

Thank you for participating in the OUSD Biology NGSS Curriculum Review process. For questions about this process or science in OUSD, contact the High School Science Coordinator [christopher.junsay@ousd.org](mailto:christopher.junsay@ousd.org).

**Background:**

The Next Generation Science Standards (NGSS) were adopted in 2013. To support the transition to NGSS, OUSD developed a transitional NGSS-aligned curriculum support for K-12 science using grant funding. As high quality, standards-aligned curriculum became available, OUSD moved forward with the curriculum adoption of Elementary FOSS in 2018 and Middle School FOSS in 2019. We are now just seeing high quality, standards-aligned curriculum available for high school science. In efforts to support NGSS teaching and learning K-12, OUSD Science will pilot NGSS-aligned Biology curricula in the 2023-24 school year and adopt, pending budget approval, in 2024-25.

The curricula selection process is informed by the WestEd K-8 (now K-12) Alliance California NGSS Early Implementation Initiative from 2014 - 2019. OUSD Science Teacher Leaders who were a part of the Early Implementation Initiative participated in various field-tests of HS materials, some of which have been revised and are currently under review by EdReports and other organizations. Based on those field tests and external reviews, Coordinators and SLTs will select the top four rated curricula to present to OUSD teachers, so they can provide feedback in the Spring of 2023. OUSD teachers will then recommend curricula to pilot in Fall of 2023, with the goal of making a final recommendation for curriculum adoption in 2024.

Jan/Feb 2023	Mar. 2023	Apr. 2023	May 2023	Jul. 2023	Aug. 2023	Sept.	Oct. 2023	Dec 2023/ Jan 2024
Send out Curriculum Review Team survey	Curriculum review/vendor presentations to leads	Teacher review  Community engagement	Identify unit(s) for pilot	Curricula Training	Pilot 1 Cycle	Curricula Training	Pilot 2 Cycle	Final Biology recommendation to the Board

**Outcomes:**

- Pilot NGSS-aligned curricula and assessments to determine the best fit to support high-quality 3-dimensional science instruction for Biology students in OUSD.
- Make a recommendation to the District for curriculum adoption.

**Participant Benefits:**

- Use of NGSS-aligned curriculum at no cost to sites
- Alignment to NGSS, reflecting new state assessment: California Science Test (CAST)
- Access to new curriculum and potential “sneak peak” of district-wide 2023-24 selected curriculum
- Deepen your understanding of NGSS and 3-dimensional learning
- Improve teaching practice through metacognition of implemented pilot curriculum
- Check-in session support throughout implementation
- Leadership opportunities for teachers in district-wide implementation of NGSS and the Biology curriculum adoption process
- Opportunities to collaborate and network with science teachers across the district

**Participant Commitments (supported with extended contract pay) - specific dates will be provided to those selected for pilot:**

- Teach **two** units total (approximately **~6-8 weeks each** of class time) with integrity ([scope and sequence](#))

- Curriculum Pilot 1 (~8 weeks), August - October
- Curriculum Pilot 2 (~6 weeks), October - December
- Implement an assessment from each of the curricula
- Approval and support of site administration throughout the piloting implementation (for at least 12 weeks - two full units).
- Be open to 1-2 non-evaluative classroom visits
- Attend Curriculum Adoption Overview in **May 2023** and Immersive Curriculum Training PD in **July 2023**
- Actively gather and share student work samples
- Provide digital feedback of each unit
- Provide an evaluation and recommendation for curriculum adoption

**2022-2023/2023 - 2024 Timeline for HighSchool Biology Curriculum Adoption Pilot**

Dates	Actions
February 13, 2023	<a href="#"><u>Biology NGSS Curriculum Pilot Application</u></a> available
<del>March 10, 2023</del> March 17, 2023	Applications due
March 31, 2023	Pilot curriculum and schools/teachers announced
<del>May 2022</del>	Curriculum Adoption Overview Professional Development & Materials Distribution ( <i>delayed to summer</i> )
July 13, 2023	HAPPY HOUR! Pilot team meet/greet with Social Studies teachers
July 26, 2023	Curriculum Training PD - Full Day ( <a href="#"><u>Scope and Sequence</u></a> draft)
August 21 - 25, 2023	First week of Curriculum Piloting Cycle 1 - Teachers begin full implementation of assigned pilot curriculum
September 15, 2023 (Buy Back Day)	Check in meeting/Curriculum Training for Round 2
October 2 - 13, 2023	Completion of Curriculum Pilot Cycle 1 Implementation
October 16 - 20, 2023	First week of Curriculum Piloting Cycle 2 - Teachers begin full implementation of second assigned curriculum
November 8, 2023	Check in meeting
Nov. 27 - Dec. 1, 2023	Completion of Curriculum Pilot Cycle 2 Implementation
January/February 2024	Final Biology Curriculum Recommendation

**Selection Process:**

Interested teachers and/or school teams should complete the [Biology Curriculum Adoption Pilot application](#) before March 17. Priority will be given to teachers that apply as a site team. Each member needs to complete a form.

For questions about this process or science in OUSD, contact the Secondary Science Coordinator [christopher.junsay@ousd.org](mailto:christopher.junsay@ousd.org)

## Appendix F - Pilot Teacher Roster

School Site	Teacher	Classes	Program Piloted		Notes
			BSCS	Lab-Aids	
Castlemont	Araman Mostaghimi	Biology; Sustainable Urban Energy	x	x	Has one class of Newcomers in International Academy
Castlemont	Luis Huertas	Biology; Chemistry	x	x	
Fremont	Rowan Driscoll	Biology; Physics	x	x	Started Lab-Aids late
Fremont	Christopher Jackson	SpED	x		
Madison Park Academy	Lady Diana Perez	SpED	x	x	
MetWest	Kevin Coulson	Biology	x	x	
Skyline	Christina McGhee	Biology	x	x	
Skyline	Lucinda Hymer	Biology	x		
Skyline	Jess Kretschmer	Biology		x	
Rudsdale	Cory Henrickson	Health			All Newcomers
Oakland Tech	Liz Grewal	Biology		x	
CCPA	Stella Ray	Biology, Science 8	x		Field tested BSCS prior to release; integrated some lessons into current curriculum within department or at site
CCPA	Conner Parkinson	Biology, Science 8	x		
Fremont	Jane Kim	Biology; Physiology	x		
Fremont	Annie Lu	Biology	x		
McClymonds	Eden Dodds	Biology	x	x	Received and reviewed

Oakland HS	Corey Mann	Biology, Physiology		x	materials; chose some activities but did not fully test or pilot
Rudsdale	Roxana Lenton	Biology		x	
Oakland Tech	Karina Orle	Physiology		x	
Madison Park Academy	Zachary Sims	Biology		x	

## Appendix G: Bio Pilot Scope/Sequence

After reviewing curriculum materials, feedback from field testing, and EdReports evaluations, the following were determined as contenders for the [fall '23 pilot](#):

[Understanding for Life \(BSCS\) and Science](#)  
[Global Issues: Biology \(Lab-Aids\)](#)

Both provide the instructional support, professional development, and materials necessary to implement a strong program aligned to NGSS. While there is some overlap with focal standards within the LS1, LS2, and LS4 strands of the selected pilot units, the arrangement and approach from each program allows teachers to work from both with limited redundancy—they explore key concepts on a more microscopic and focused scale (BSCS) to thinking about implications on a macro or global scale (Lab-Aids). This will also allow teachers to continue using the remaining units from BSCS and one more unit from Lab-Aids in the spring as we deliberate over the program that will ultimately be adopted.

Ideally, piloting teachers could run through both rounds. However, we recognize the demand this can place on teachers. Therefore, we are open to teachers engaging in one round, but providing in-depth feedback during our curriculum discussion meetings so involved parties have an understanding of the experience with both options.

### **Round 1 (BSCS): Infectious Disease (~ 7 - 9 weeks August to October)**

Resources can be accessed from the portal or in links below

Essential Question: How can bacterial infections make us so sick, and why are they getting harder to treat?

Big Idea: Widespread use (and misuse) of antibiotics causes the development of antibiotic-resistant populations of bacteria that can cause potentially fatal infections



Alignment to NGSS ([link to BSCS details](#)):

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| 1   | 2   | 3   | 1   |
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| 4-  | 4-  | 4-  |     |
| 2   | 3   | 4   |     |

### Chapter 1

<i>Sequence and focus question</i>	<i>Materials</i> <small>*link to slides will prompt you to make a copy</small>	<i>Additional resources</i>
<p><b>Lesson 1: How can bacteria make us so sick?</b> Bacteria interact with their environment to survive and reproduce. These activities can harm human cells.</p>	<p><a href="#">Slides</a></p> <p><a href="#">Student Sheets</a></p>	<p><a href="#">Zach's story</a> (video)</p>
<p><b>Lesson 2: What are bacteria and where are they?</b> Bacteria are all around us. They are different from viruses, they can be transferred from one environment to another and they may grow more in one environment than they will in another.</p>	<p><a href="#">Slides</a></p> <p><a href="#">Student Sheets</a></p>	
<p><b>Lesson 3: What do bacteria need to live and grow?</b> Bacteria growth on agar plates is the result of individual bacteria reproducing exponentially until they run out of resources.</p>	<p><a href="#">Slides</a></p> <p><a href="#">Student Sheets</a></p>	<p><a href="#">E. Coli Timelapse</a> (video)</p>
<p><b>Lesson 4: Why do some bacteria cause us problems?</b> Some but not all bacteria can cause us problems when they enter our bodies. This may lead to symptoms of infection</p>	<p><a href="#">Slides</a></p> <p><a href="#">Student Sheets</a></p>	
<p><b>Lesson 5: How can bacteria cause infections?</b> Bacteria growth in our bodies can damage our cells. The more bacteria grow and reproduce</p>	<p><a href="#">Slides</a></p> <p><a href="#">Student Sheets</a></p>	

the more damage we get in our cells.		
<b>Chapter 1 Assessment</b>	<a href="#">Slides</a> <a href="#">Student Sheets</a>	
<b><u>Chapter 2</u></b>		
<b>Lesson 6: What is the body doing when we get an infection?</b> Our body responds to infection with the immune response and specialized cells that help fight infection.	<a href="#">Slides</a> <a href="#">Student Sheets</a>	
<b>Lesson 7: How do we know when we're sick?</b> The body has a healthy range that it maintains despite changes in the outside environment. The body going outside of healthy range often indicates illness.	<a href="#">Slides</a> <a href="#">Student Sheets</a>	
<b>Lesson 8: Why are all these changes happening in the body?</b> The body increases temperature and specialized cells to help fight infection.	<a href="#">Slides</a> <a href="#">Student Sheets</a>	<a href="#">Bloodstream</a> (video) <a href="#">Phagocytosis</a> (video)
<b>Lesson 9: How can the body control its response?</b> The body uses feedback mechanisms to help regulate when the immune response is triggered.	<a href="#">Slides</a> <a href="#">Student Sheets</a>	
<b>Lesson 10: How does the body respond to infections?</b> The body responds to bacterial infection by ramping up the immune response. It will either kill off the infection or the infection can take over resulting in further serious illness.	<a href="#">Slides</a> <a href="#">Student Sheets</a>	
<b>Chapter 2 Assessment</b>	<a href="#">Slides</a> <a href="#">Student Sheets</a>	
<b><u>Chapter 3</u></b>		
<b>Lesson 11: Why aren't antibiotics working as well as they used to?</b> Antibiotics are not as effective against infection as they used to be	<a href="#">Slides</a> <a href="#">Student Sheets</a>	<a href="#">Antibiotic use survey doc</a>
<b>Lesson 12: How do antibiotics work?</b> Antibiotics reduce bacterial population because they change the environment by	<a href="#">Slides</a> <a href="#">Student Sheets</a>	

targeting traits bacteria have but our cells don't.		
<b>Lesson 13: Why do antibiotics sometimes not work?</b> Bacteria populations have variation because some individuals have different traits which may make the bacteria resistant to antibiotics.	<a href="#">Slides</a> <a href="#">Student Sheets</a>	
<b>Lesson 14: How do antibiotic resistant bacteria become more common over time?</b> Bacteria with traits that help them survive antibiotics become a larger population of bacteria over multiple generations.	<a href="#">Slides</a> <a href="#">Student Sheets</a>	
<b>Lesson 15: What explains the increasing incidence of antibiotic resistant infections?</b> When antibiotics are overused or used incorrectly, we increase the amount of antibiotic resistant bacteria.	<a href="#">Slides</a> <a href="#">Student Sheets</a>	
<b>Lesson 16 (<i>culminating task</i>): How can we work together with medical professionals to be better stewards of antibiotics?</b> To prevent continued selection for antibiotic resistant populations, we need to work in partnership with medical professionals.	Slides Student Sheets	<a href="#">Teamwork with our doctors</a>
<b>Unit Assessment</b>	<a href="#">Slides</a> <a href="#">Student Sheet</a>	<a href="#">Pesticide application</a> (video)

Round 2 (Lab-Aids): Improving Global Health (~6 - 8 weeks October to December)

[Access portal for more details and resources \(link restricted to pilot teachers\)-- available links:](#)

[Storyline and sensemaking](#)

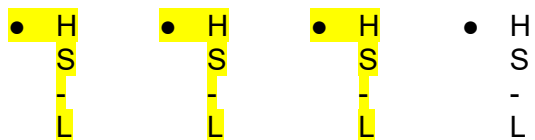
Kit info: [Materials list](#)

[Materials prep](#)

Essential Question: What are the challenges to Human Health in a changing world?

Big Idea: Human Health is increasingly subject to emerging global patterns, including extreme heat events, changes in the frequency of disease, and climate effects

Alignment to NGSS ([link to Lab-Aids details](#)):



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*\*focal standards for learning sequence 2; if piloting both units, this sequence can be skipped because of detailed coverage and support in BSCS*

## Learning sequence 1

### Activity 1: Survival Needs

**Guiding question:** What is most necessary to keep the human body functioning in extreme heat?

Students explore the health effects of extreme heat on the human body and its ability to survive. Students engage in a desert survival scenario that models some of the conditions that stress the human body during an extreme heat event. Students determine what items are most essential to keep the human body functioning in extreme heat. They begin to reflect on how the human body responds to external change.

### Activity 2: Everyday Hydration

**Guiding question:** How does lack of water affect an organism?

Students focus on hydration as a key factor for maintaining a living system's internal conditions. They further examine the impact of extreme heat events by modeling the effect of dehydration. Students look at how a lack of water affects organisms at both the macroscopic and the microscopic levels

## Learning sequence 2 - SKIP if you piloted BSCS materials during Round 1\*\*

**\*\*Unit 1 of BSCS goes into deeper details of infection. These activities also has fewest items in the kit "Cells" kit**

### Activity 3: Homeostasis Disrupted

**Guiding question:** What happens when disease disrupts a body's normal functioning?

Students examine how infectious and noninfectious disease affects human body systems. They read case studies of three different infectious and noninfectious diseases, which model how negative feedback loops maintain homeostasis in body temperature (disrupted during heatstroke), blood glucose levels (disrupted by diabetes), and fluid levels (disrupted by diarrhea caused by rotavirus) and how disease disrupts these feedback loops. Students identify which human body systems interact to maintain each of these functions.

### Activity 4: Body Systems in Balance

**Guiding question:** How do levels of a human body system work together to perform body functions?

At this point, students have an understanding that human health is dependent on different levels of organization (cells, tissues, organs, systems) working together to perform functions within an organism. Students examine the structural and functional relationships among the levels by focusing on the cardiovascular, digestive, endocrine, and respiratory systems. They use a model to further explore individual parts of each system and their interaction with other levels of the same system, learning how a disruption to each system affects the functioning of that system and how homeostasis can be restored. Students discuss how both interacting systems and medical interventions restore homeostasis (e.g., diabetes can be managed by diet and by taking insulin). Students further develop the idea that feedback mechanisms maintain homeostasis and mediate behaviors.

### Activity 5: Evidence of Disease

**Guiding question:** How do diseases affect organisms at the cellular level?

To more deeply understand that human health depends on different levels of organization working together, students read about how the symptoms of disease may first be observed at the system or body level. Students then look for evidence of disruption due to disease at the cellular level. They examine microscope slides of human blood to reveal evidence of ways that the body has been disrupted. Students make conclusions about the possible mechanisms for the disruption of the feedback loops essential for homeostasis.

### Activity 6: Specialized Cells and Disease

**Guiding question:** How does disease disrupt the normal functions of specialized cells, tissues, and organs?

Students build on their understanding of how body systems work together at various levels to carry out cellular functions as they engage in a computer simulation to explore different types of cells and how their specialized structures allow them to perform specific functions. Students then develop and use visual models to construct possible explanations for how these functions are disrupted by specific diseases

### Activity 7: Homeostasis and Medical Treatment

**Guiding question:** In what ways does modern medicine help maintain human health?

Students apply key understandings about homeostasis and the roles of interacting systems at different levels of organization in the body to the effects of COVID-19. They examine a feedback loop on breathing that highlights normal functioning of the human body. Students complete a reading on the SARS-CoV-2 coronavirus: how it affects interacting body systems and how medical treatments can restore and maintain homeostasis.

### Activity 8: Feedback Loops in Humans

**Guiding question:** How do body systems interact to restore homeostasis?

Students consider the increasing incidence of global respiratory disease. They apply their knowledge of how body systems work together as they plan and conduct an investigation on how human body systems—specifically, the circulatory and respiratory systems—interact to maintain homeostasis. This activity complete the second learning sequence in this unit, focused on the investigative phenomenon that *global patterns related to the prevalence of disease are changing*.

## Learning sequence 3

### Activity 9: Global Nutrition

**Guiding question:** How does food availability and quality affect human health?

Students begin to explore how global changes are likely to affect the future food supply and quality. Students consider the characteristics of a healthy food supply by looking at food consumption in 12 countries. They compare the total number of calories and the amount of protein and fat consumed in different parts of the world. Students consider to what extent

people are meeting their basic nutritional needs. They examine both undernourishment (undernutrition) and obesity (overnutrition) in terms of energy balance and changes in body mass due to storage of excess matter derived from food. Students investigate the importance of micronutrients and the effects of a lack of micronutrients on a country-by-country basis, and they apply what they have learned to suggest how climate change might lead to problems with the supply of healthy food

### **Activity 10: Burning Calories**

**Guiding question:** How do scientists measure the Calories in various foods?

Students continue their investigation into the energy content and nutritional value of food. Students begin to explore systems and subsystems models to track the movement of energy released from food during the chemical reactions of combustion and cellular respiration. Students measure the energy stored in food by completely burning a food sample. They calculate the amount of thermal energy transferred, based on measurements of the volume of water and the temperature change produced. Students conclude that the breakdown of food for energy via the process of cellular respiration transfers only some of the chemical energy in food into thermal energy. They make sense of graphs that show the energy changes that accompany the changes in matter that take place during cellular respiration, and begin to develop the idea that much of the energy is harnessed as a form of chemical energy that is easily used by cells

### **Activity 11: How Plants Make Food**

**Guiding question:** How did scientists gather and interpret evidence for how plants provide energy for living organisms?

Students build on the idea that an organism's need for food is dependent on plant cells, which are specialized to make their own food. Students further examine the process of photosynthesis through conclusions drawn from a number of science experiments, and consider how the body of knowledge on photosynthesis has grown over time and continues to grow. Students demonstrate their understanding of photosynthesis by constructing a model that illustrates how this process transforms light energy into the stored chemical energy used by almost all living organisms.

### **Activity 12: Photosynthesis and the Environment**

**Guiding question:** How do changing conditions affect the rate of photosynthesis in plants?

Students further explore the relationship between photosynthesis and food quality and supply as they consider how changing external conditions affect food production. Students plan and conduct an experiment to investigate the effect of a single variable on the rate of photosynthesis. Students determine how the production of gas during photosynthesis can be used to test whether different variables increase or decrease the rate of photosynthesis. They

begin to explore how light energy is transformed into stored chemical energy at the cellular level.

### **Activity 13: Feeding the World's Population**

**Guiding question:** How are global changes affecting the food supply?

Students further explore the investigative phenomenon and driving question for this learning sequence by analyzing scientific projections on the future and quality of the global food supply. Students examine eight data sets, generating questions about each and determining patterns in the data. They apply their new knowledge to the relationship between these global changes and the sustainability of the food supply.

### **Activity 14: Investigating Cellular Respiration**

**Guiding question:** How do various factors in the environment affect the rate of cellular respiration in plants?

Students review their current understanding of the process of cellular respiration, and develop a preliminary model of this process within the cells of plants and animals. Students brainstorm environmental variables that might affect cellular respiration, and design investigations to test their hypotheses about the effects of these variables on cellular respiration in beans. Students relate their results to the investigative phenomenon for this learning sequence: *Human health is dependent on the energy and matter derived from food.*

### **Activity 15: Energy for Life**

**Guiding question:** How does cellular respiration produce usable energy?

Students build on what they have learned about cellular respiration to investigate how chemical reactions can transfer stored energy. Students model the combustion of methane, record the energy changes as bonds in the reactants are broken and bonds in the products are formed, and calculate the overall energy change—all of which helps them more fully understand how a chemical reaction such as combustion or respiration can transfer energy through the rearrangements of molecules. Students read about how cellular respiration transfers chemical energy stored in food to energy that can be used by the cell. Students use what they learn to enhance their models of the flow of energy and matter during cellular respiration.

### **Activity 16: Matter for Cells**



**Guiding question:** How does an organism use the matter in food?

Students categorize and sequence cards that provide information about the substances (matter) in food and how cells use these substances as building blocks to synthesize carbohydrates and proteins for their own functioning and growth. Students observe that cells use the substances in food in three ways: to meet the cells' immediate needs, to synthesize the large molecules needed to carry out the cells' functions, and to synthesize large molecules that can be stored until the organism needs them. Students use what they learn to develop a model showing how cells use the matter in the substances they obtain from food.

### **Activity 17: Designing Solutions: World Health**

**Guiding question:** What solutions can you design for improving global health?

The unit culminates with a return to the broader focus of human health. Students apply their scientific learning to emerging global patterns, including extreme heat events, changes in the frequency of disease, and climate effects on the food supply. Students consider the stakeholders involved in some of these issues and determine what can be done to reduce such impacts by designing, evaluating, and refining solutions for global health challenges.

## 2023-2024 High School Science Bio Pilot debrief

<b>Audience</b>	<i>Bio/Life Science teachers and support providers</i>	
<b>Year Long Outcomes:</b>	<ol style="list-style-type: none"> <li>1. Connect and collaborate as a high school science community</li> <li>2. Pilot and offer feedback around curriculum options</li> <li>3. Internalize instructional strategies that align to NGSS teaching and learning</li> </ol>	
	2023 - 2024 <a href="#">Scope and Sequence</a>	<i>Zoom link (see agenda for afternoon link)</i>
	October 20	<a href="#">October 25</a>

### October 25

<b>Session Outcomes:</b>	<ol style="list-style-type: none"> <li>1. Identify high leverage practices within the curriculum that supports students to:               <ol style="list-style-type: none"> <li>a. Ask and answer their own questions about phenomena and solutions to problems around societal issues;</li> <li>b. Develop models to communicate their thinking and ideas to each other;</li> <li>c. Revise their models as they answer their questions, and ask new questions as they confront limits to their understanding;</li> <li>d. Construct explanations through investigations and discussions</li> </ol> </li> <li>2. Raise issues that have been coming up in implementation of the curriculum thus far, including any modifications that were made to address potential gaps or areas of weakness</li> <li>3. Plan and practice routines that you expect to use in your upcoming teaching</li> </ol>
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Time	Agenda	Notes
8:30 - 8:40	<p><b>Welcome, announcements, and sign-in</b></p> <p><i>What's a recent win in the work?</i></p>	<p>Name Site Pronouns</p>
8:40 - 8:50	<p><b>Empty the bucket....haiku</b></p> <p>Use this time to "empty the bucket"... what are some issues you might be wrestling with at your site, in your classroom, etc...</p>	<p><i>It helps to name the things that we might be sitting with before diving into our shared work</i></p> <p><i>Rather than simply venting, let's see if we can capture and express in a succinct way</i></p>

8:50 - 9:00	<p><b>Pulse check</b></p>	<p>Where are you at with the curriculum?</p> <p>Lesson 4 case studies/assessment; developing CER; spent a number of weeks at the beginning of the year setting foundation for graphing and reading data</p> <p>right around lesson 4; plans to end with CER; also completed foundational work developing some skills</p>		
<p><b>Anchored Inquiry Learning - Model overview</b></p> <p><b>Anchor→investigate→synthesize→gap analysis→culminating task</b></p> <p><b>High leverage practices - what specific tools and routines have been useful or felt successful?</b> (look through the teacher guide to see what tools/routines are available)</p>				
<p><i>Driving Question Board</i> (pgs. 16 - 18)</p>		<p><i>"Navigate" routine</i> (pgs. 18 - 19)</p>	<p><i>Developing and revising explanatory models</i> (pgs. 19 - 24)</p>	<p><i>Literacy - reading and writing</i> (pgs. 28 - 31)</p>
9:00 - 9:20	<p><i>Students understand that science start with questions</i></p> <p><i>Started board and had students revisit 1x to answer Qs and make new ones</i></p> <p><i>Helpful to elicit questions</i></p> <p><i>Strong ranking and grouping of DGs</i></p> <p><i>Have not categorzied Qs this year</i></p> <p><i>Revising questions for depth</i></p> <p><i>Adding questions later to DQB</i></p> <p><i>Challenging to link back to questions in a way that feels genuine</i></p>	<p><i>Another lesson put into Ed Puzzle; super engaging for students this year</i></p> <p><i>Navigation is NOT routine due to assessment</i></p> <p><i>Students had a hard time remembering what we talked about from last class, so going back to our questions took more time</i></p>	<p><i>Able to show what a model can be—there's no ONE right answer</i></p> <p><i>Models are a great way for students to begin to make sense; revisiting needs to be more intentional and scaffolding</i></p> <p><i>Students don't seem to understand the importance of models</i></p> <p><i>Skipped model trackers this year...trying to get back</i></p> <p><i>Students were not able to create their own model, despite talking about it</i></p>	

<i>Talk routines</i> (pg. 32)	<i>Vocab development</i> (pgs. 32 - 33)	<i>Explanation and argumentation</i> (pgs. 33 - 34)	<i>Assessment</i> (pgs. 35 - 37)
<p><i>Still need practice, but students sharing ideas leading to more questions</i></p> <p><i>Students don't value each other's ideas</i></p> <p><i>Students didn't want to talk to each other</i></p>			

**Other(s)?**

**What tools and routines do you still have questions about? Or what tools/routines have presented you or your students with challenges?**

Successes = green sticky  
Challenges/questions = yellow sticky

We'll have a chance to collect/share resources and plan a short segment

**I<sup>2</sup> - what do the sticky notes and posters show us?**

What are we noticing? What's the caption?

Literacy routines have more green sticky notes; specifically around annotation and I<sup>2</sup> routine

Teachers noticing students had a hard time with models—maybe the phenomena is too abstract or including all components are challenging

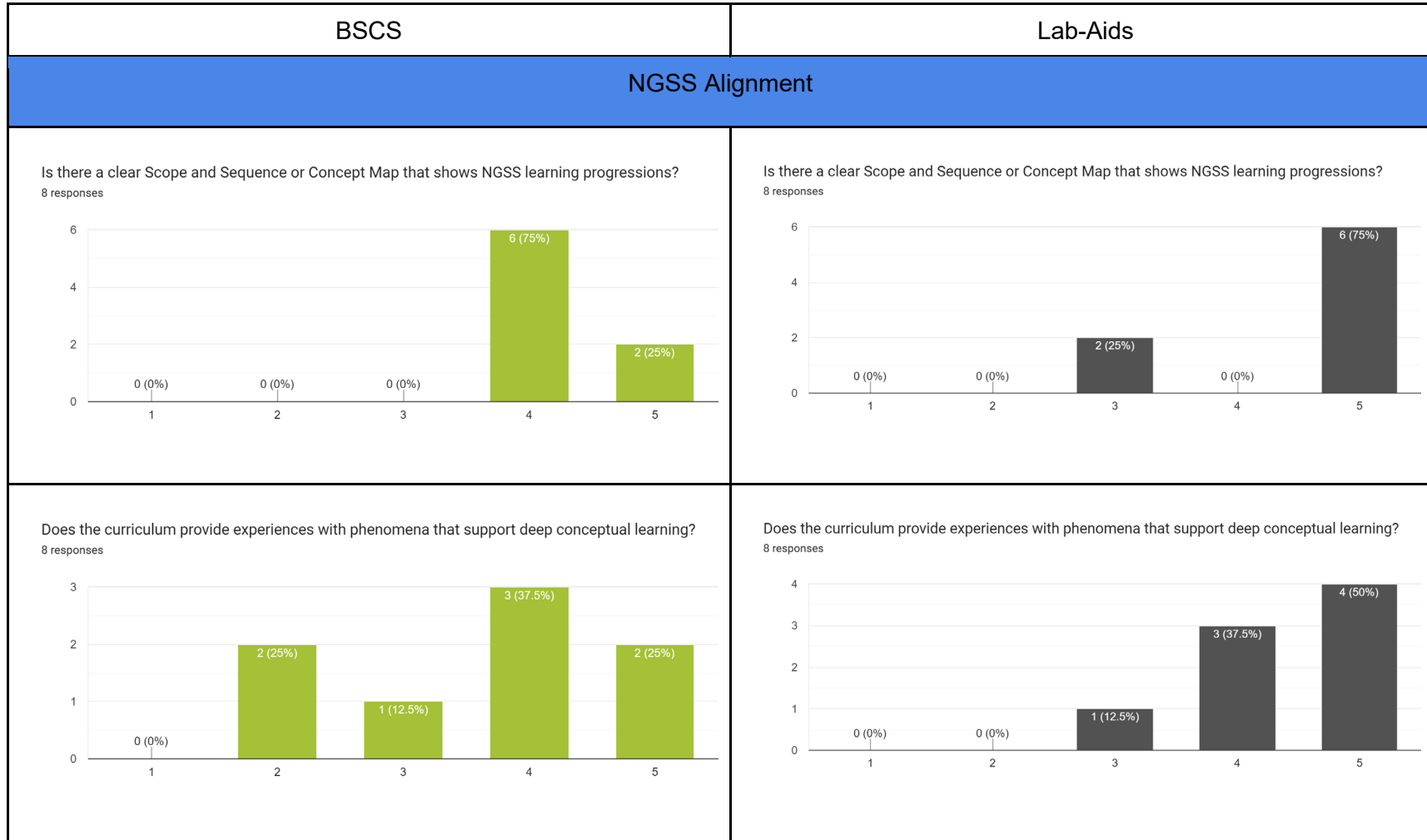
Assessments require a lot support—maybe the way they are presented don't work for students or are not offering enough specific opportunities to gauge understanding

		<p>Positive comments around DQB focused on set up (getting started)--this seems accessible for students</p> <p>Challenges with DQB focused on not being to return to it – not able to find a good way to transition or come back</p> <p>Only one comment on vocab development – one specific strategy felt useful; need support on how to implement “words we earn vs. words we learn” strategies</p>
9:20 - 9:40	<p><b>What modifications have you made—including lessons you’ve cut/skipped?</b></p>	<p>It’s impossible and unrealistic to ask us to adopt with “fidelity”--what shifts have you made in service of student learning?</p> <p>not trying to do everything; when seeing students struggle with a particular skill, spent time breaking down key components</p> <p>In general, cutting things might be challenging because of the cohesive and involved story line</p> <p><b>Looking forward to what is left, what are some things with which you’d like support?</b></p>
9:40 - 10:00	<p><b>Planning - prep</b></p> <p>Identify an upcoming instructional segment tied to a specific routine and lesson that you’d like to try out – if you have completed all lessons, choose a practice that you’d like to revise (and comes up again in Lab-Aids)</p>	<ul style="list-style-type: none"> <li>● Driving Question Board</li> <li>● Analyzing/Developing Models</li> <li>● Reading support</li> <li>● Writing frames</li> <li>● Talk routines</li> </ul>
Stretch Break		
10:10 - 11:00	<p><b>Planning</b></p> <p>What is the learning target of the larger lesson?</p> <p>What are some key summative tasks?</p>	<p>address the question “are all bacteria bad?” and determining bodies response to infection (homeostasis)</p> <p>CER presentation to promote discussion, and have students provide feedback (glows/grows)</p> <ul style="list-style-type: none"> <li>● T models the types of questions/thoughts they could share–</li> </ul>

		<p>examples of glows/grows</p> <ul style="list-style-type: none"> <li>● Incentivize interactions (tied to Halloween) aligned to some of the expectations: prioritize glows (what did the presenter do specifically well with their CER)</li> <li>● Individual reflection of glows, with them also thinking about a grow</li> </ul> <p>- <b>analyze data</b> (carrying capacity); <b>communicate</b> own findings from experiment; <b>obtain, evaluate, communicate</b> info about antibiotic resistance effectiveness of antibiotics and relationship to antibiotic resistance</p> <p>Summative - lab report with CER built in (model as evidence); research element from antibiotic resistance</p> <p>Leading</p>
11:00 - 11:25	<p><b>Planning think-aloud</b></p> <p>Do a think aloud as you go through <i>a part</i> of your lesson you'd like some feedback on</p> <p>What questions are coming up for you?</p>	<p>Run through your segment with the group</p> <p>Warm/cool feedback</p>
11:25 - 11:30	<p><u>Curriculum survey</u> and lingering questions</p> <p>*go through a practice submission</p> <p>*what other info might we need?</p>	<p><i>If you <u>are not</u> joining us for the Lab-Aids session, then please provide us with Gots and Needs</i></p>
Lunch Break		
12:30 - 4:25	<p><b>Lab-Aids preview and training</b></p>	<p><a href="https://us02web.zoom.us/j/89346545898?pwd=SFJNL2dldkRyaHVyTVZ5cG16UGdJUT09">https://us02web.zoom.us/j/89346545898?pwd=SFJNL2dldkRyaHVyTVZ5cG16UGdJUT09</a></p> <p>Meeting ID: 893 4654 5898</p> <p>Passcode: 961378</p>
Gots and Needs		

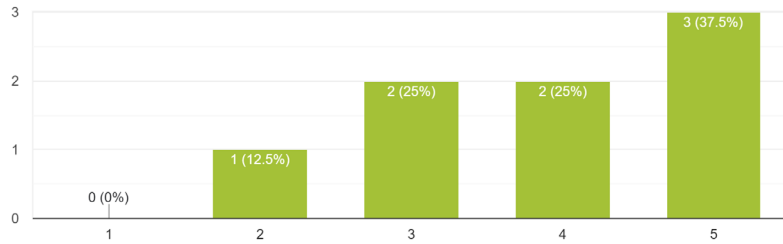
Appendix I - Bio Pilot Data Synthesis

Teacher survey responses



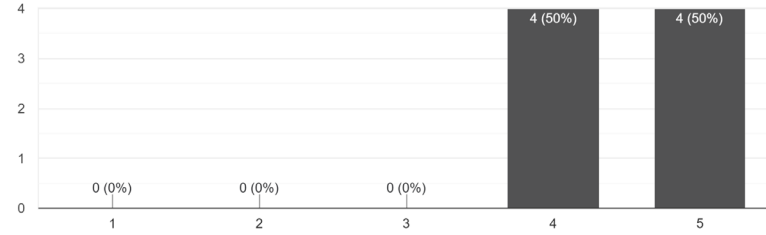
Does the curriculum have students developing and discussing open-ended or driving questions?

8 responses



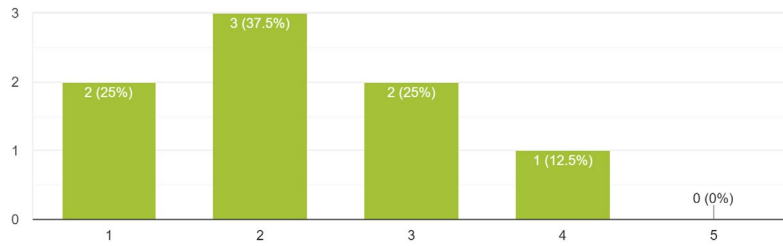
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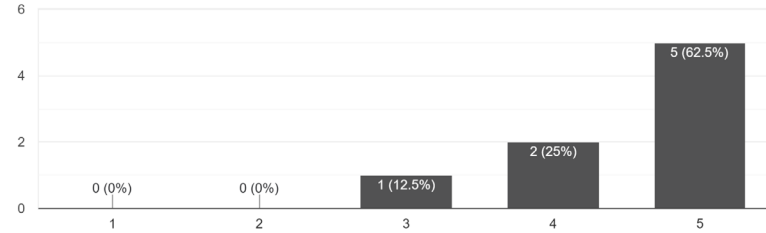
Does the curriculum provide opportunities for students to plan and carry out investigations?

8 responses



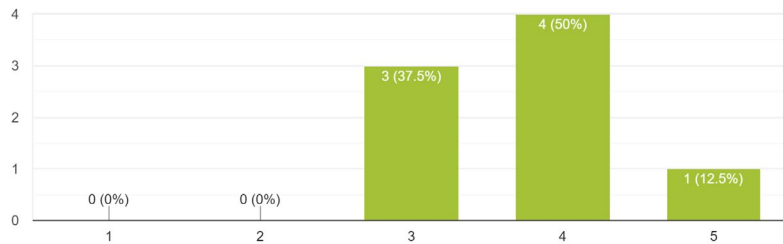
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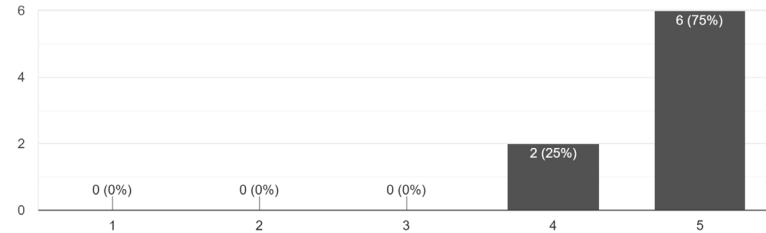
Does the curriculum provide opportunities for students to analyze and interpret data?

8 responses



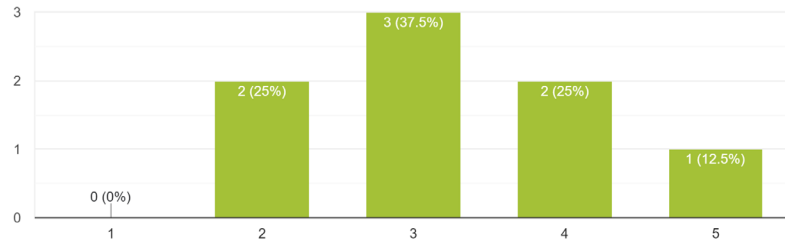
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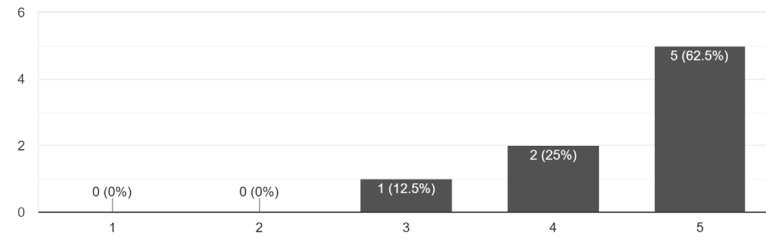




Are Science & Engineering Practices (SEPs), Disciplinary Core Ideas (DCIs), and Crosscutting Concepts (CCCs) woven together so that student ta... STEM professionals do and think about science?  
8 responses

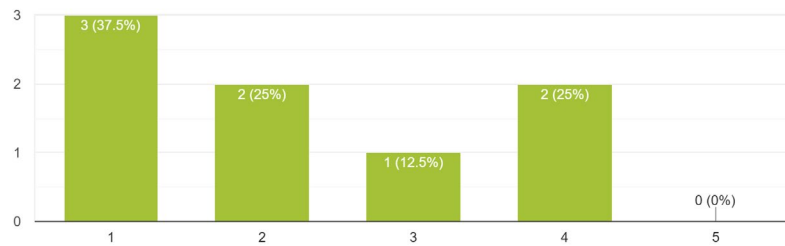


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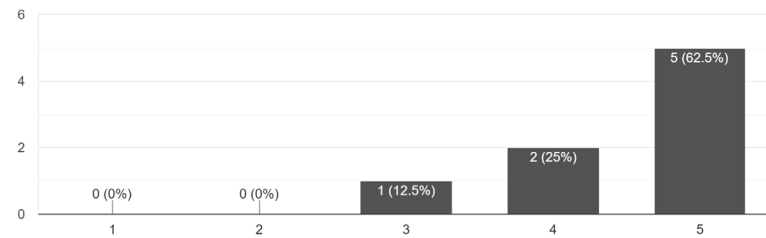


### Language, Literacy, and Common Core Connections

Does the curriculum include embedded supports for language use and development?  
8 responses

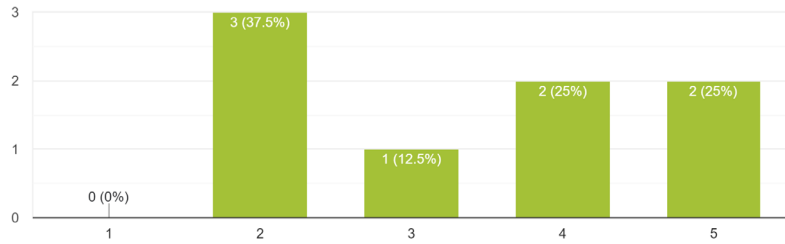


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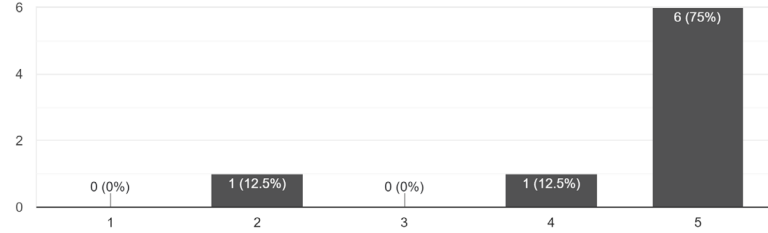
Are there frequent opportunities to write for a variety of purposes, such as collecting data, developing, using, and revising models, constructin...ased on evidence, and reflecting on their learning?

8 responses



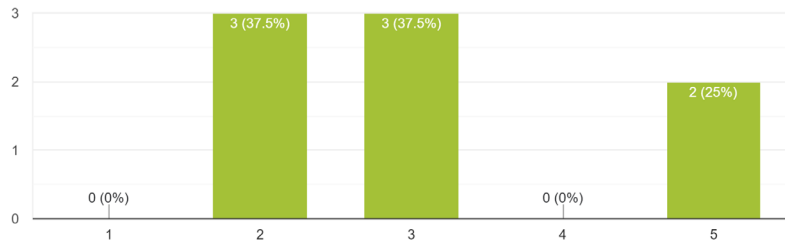
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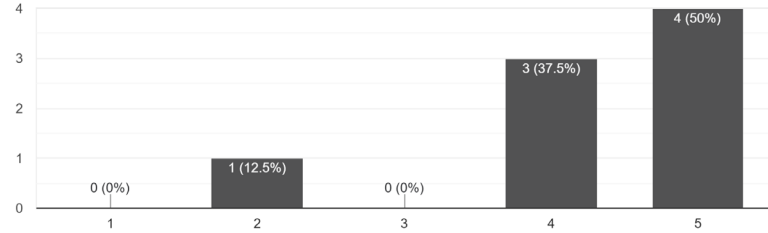
Does the curriculum have students gather multiple forms of evidence to generate explanations and claims?

8 responses



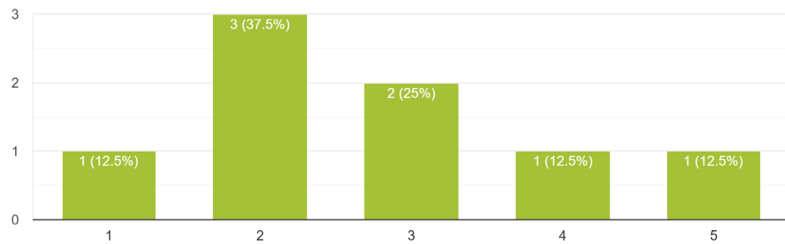
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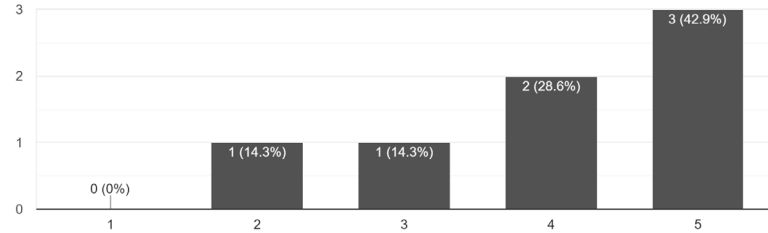
Does the curriculum include frequent and multi-modal opportunities for students to engage in discussion and argumentation to make sense of data and deepen their understanding?

8 responses



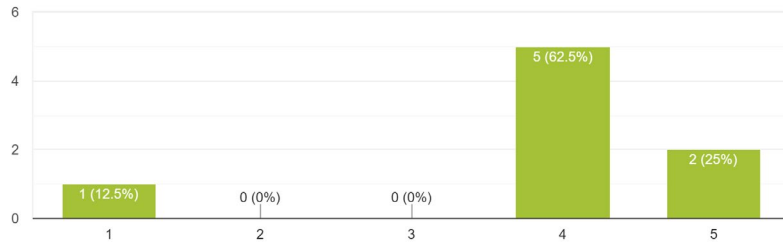
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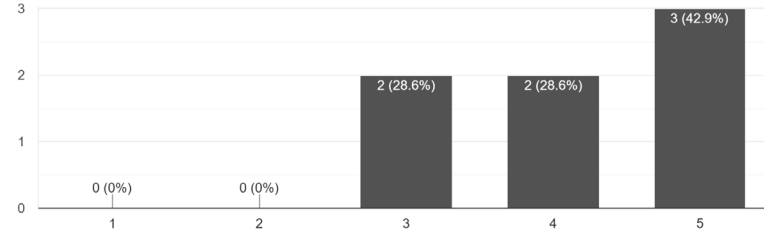
Will students read complex text to deepen their understanding?

8 responses



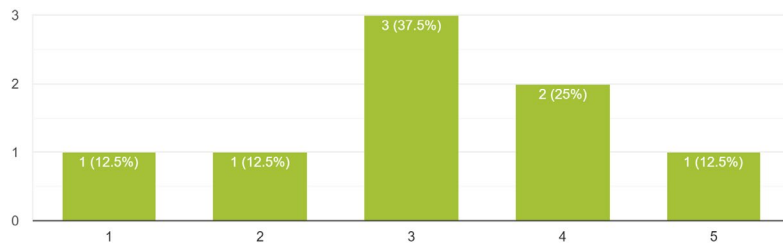
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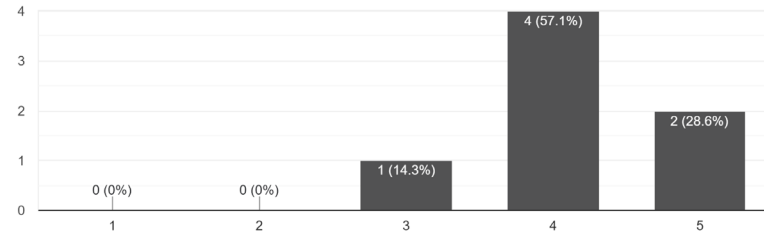
Do the reading materials allow students to build on ideas from the activities and hands-on experiences?

8 responses



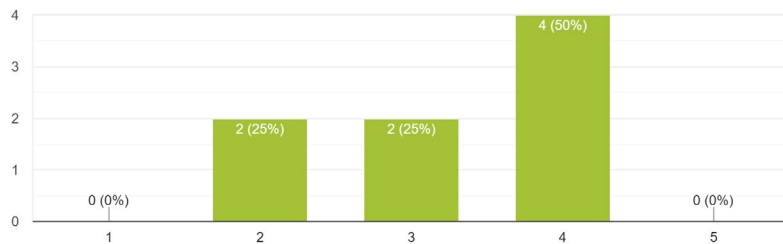
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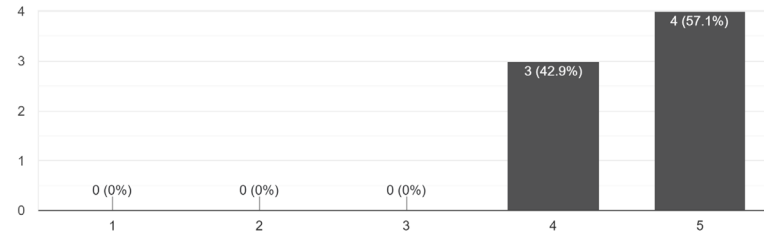
Does the curriculum provide support for mathematical thinking & data analysis?

8 responses



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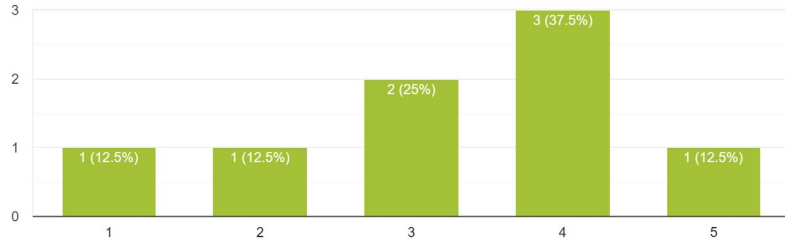
7 responses



## Student Materials and Equity

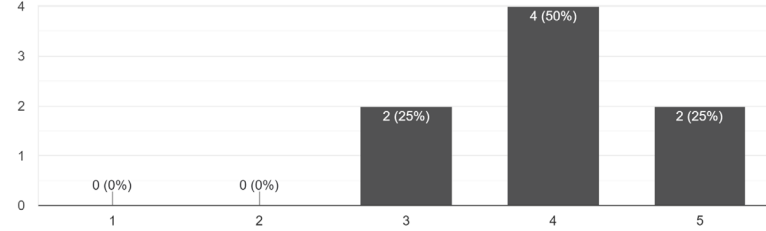
Do the learning experiences hook into students' prior knowledge?

8 responses



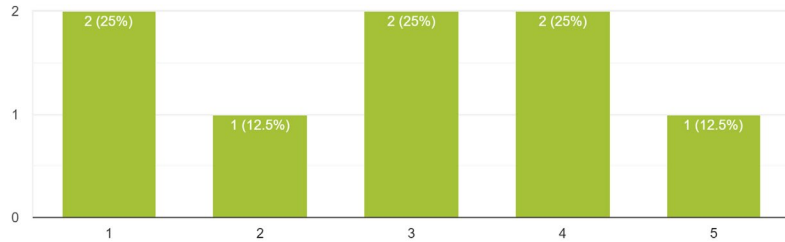
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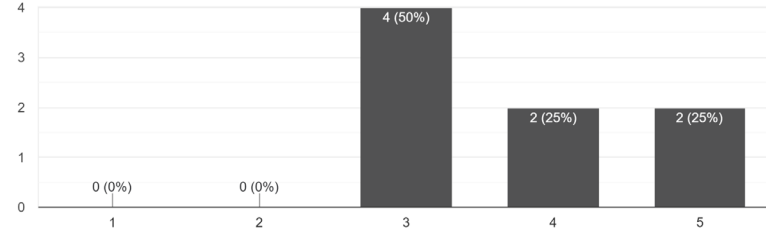
Do the learning experiences seem relevant to the lives of the students you teach?

8 responses



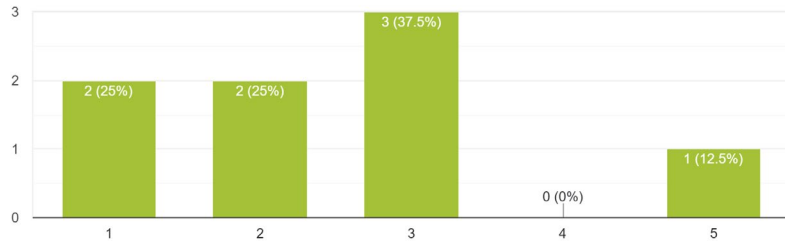
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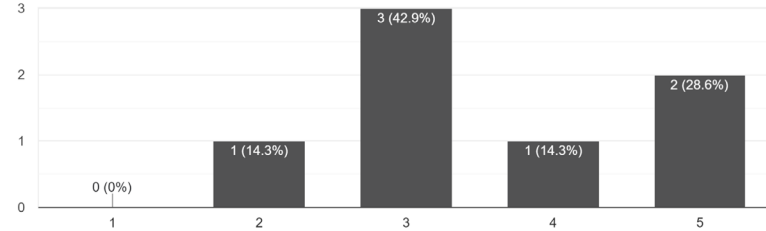
Do the materials reflect the diversity of our school communities?

8 responses



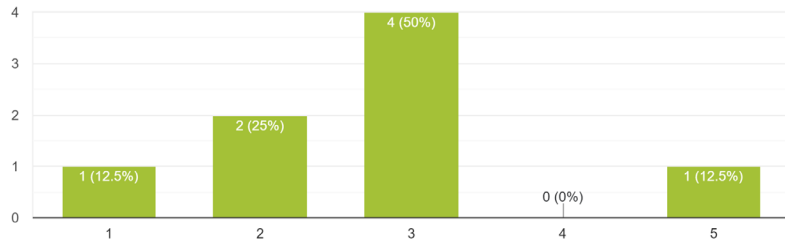
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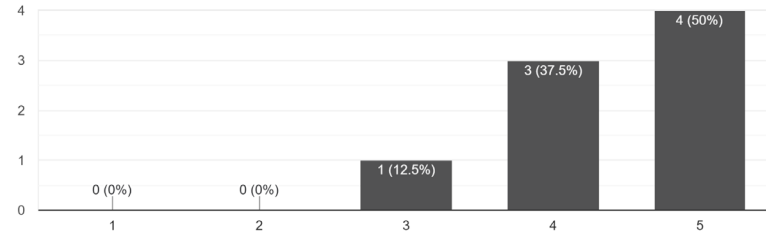
Do the learning experiences allow for and support student access to information and expression of understanding in multiple ways?

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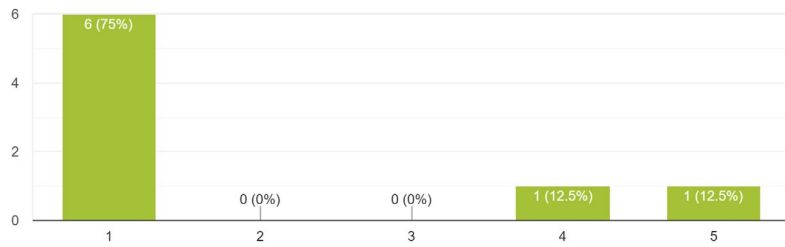
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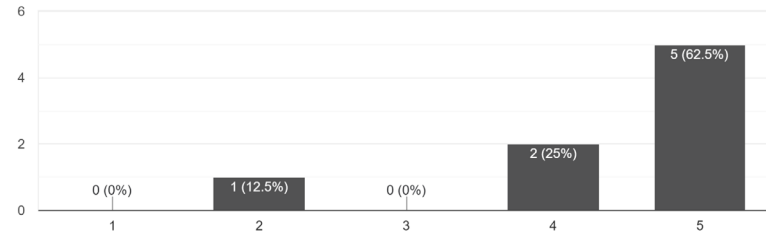
Are student materials available in languages other than English?

8 responses



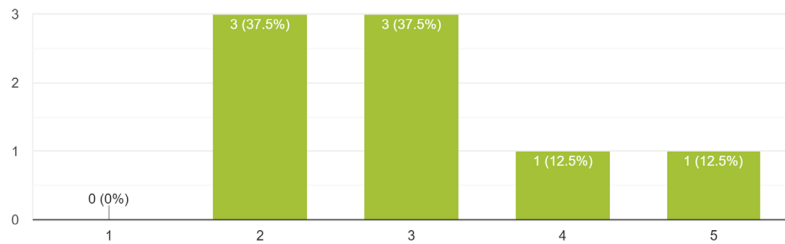
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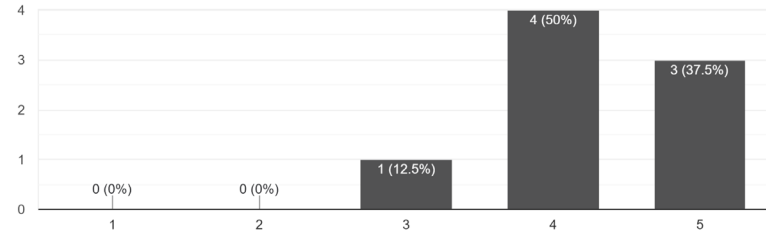
Are there multiple entry points in which students can engage with the materials, (i.e. are there videos, visual organizers, or UDL adaptations that support student learning)?

8 responses



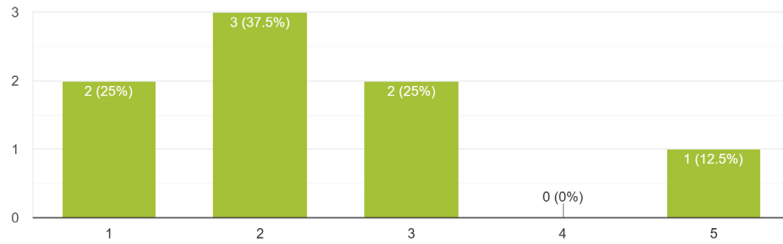
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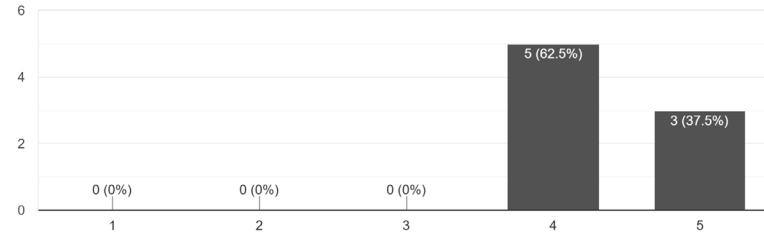
Does the curriculum include guidance for scaffolds to support students who may need them to access the content?

8 responses



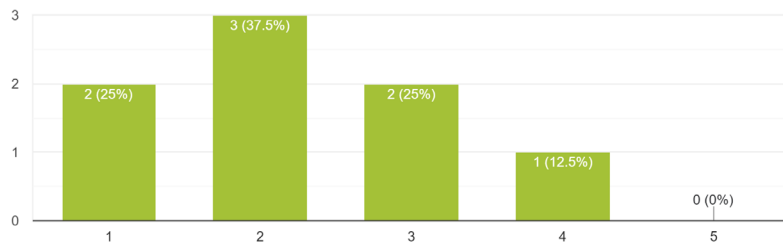
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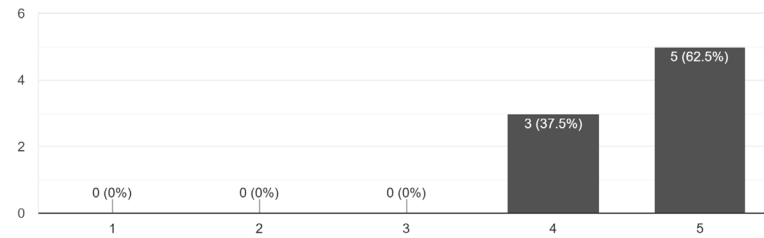
Does the curriculum include tools and other materials representative of Biology and Life Science fields that support hands-on experiences?

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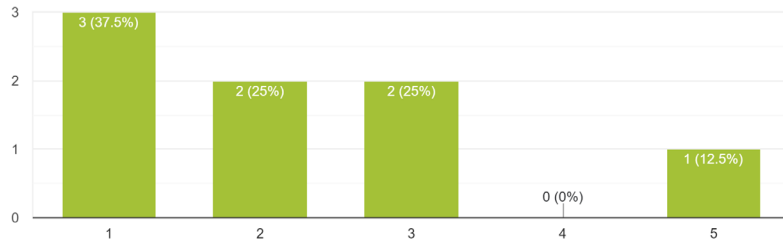
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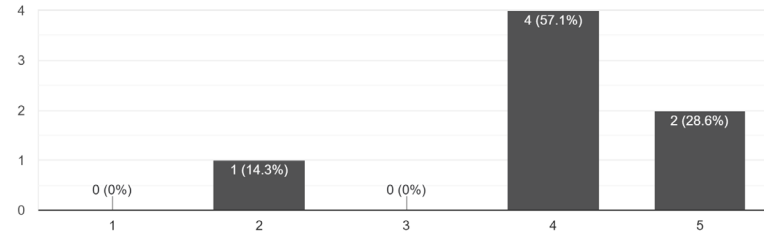
Does the curriculum include traditional tools of science (e.g. measuring devices) and common objects so that students can see opportunities for science in their everyday lives?

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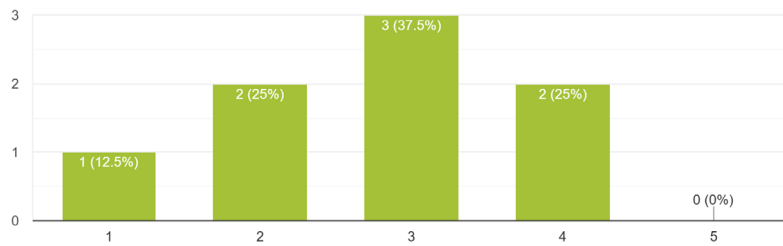
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## Assessments

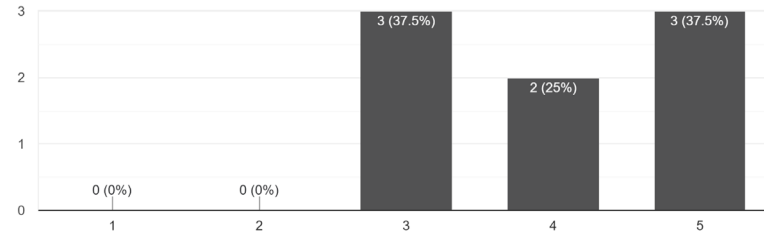
Do the assessments (formative and summative) provide information about both conceptual understanding and skills (e.g. Science and Engineering Practices)?

8 responses



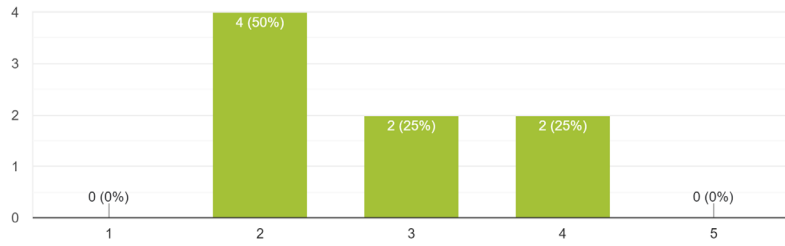
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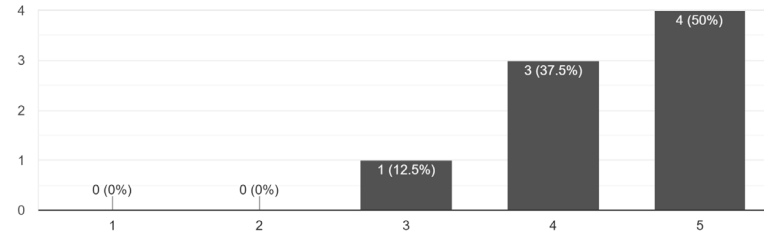
Is there guidance around the types of questions to pose for formative assessments and checks for understanding?

8 responses



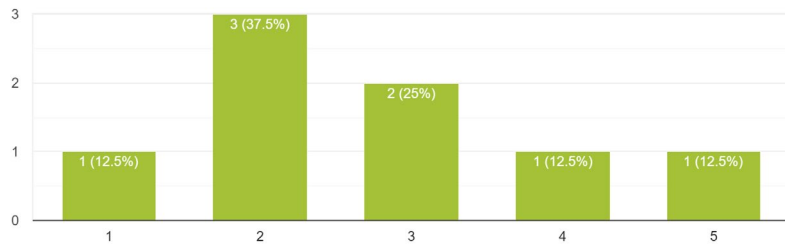
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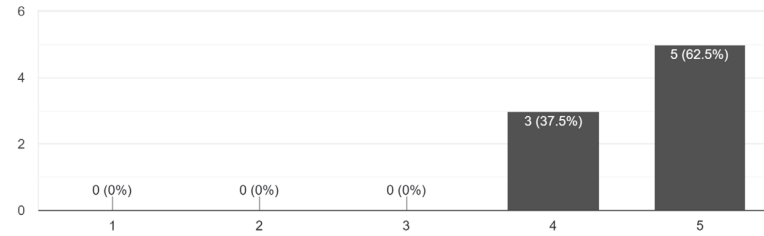
Does the curriculum provide guidance for how to use the assessment data?

8 responses



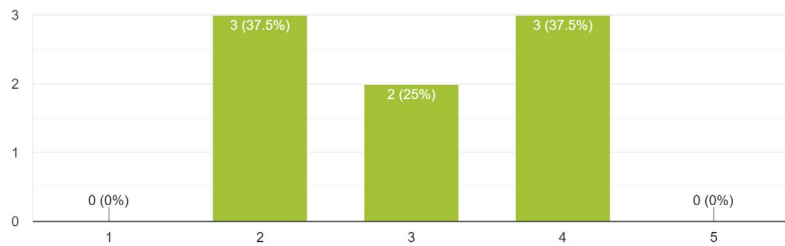
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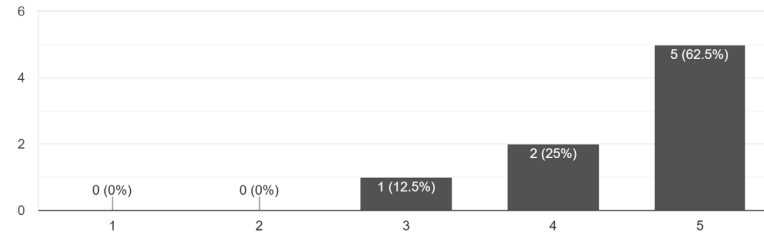
Are the summative assessments easily administered?

8 responses



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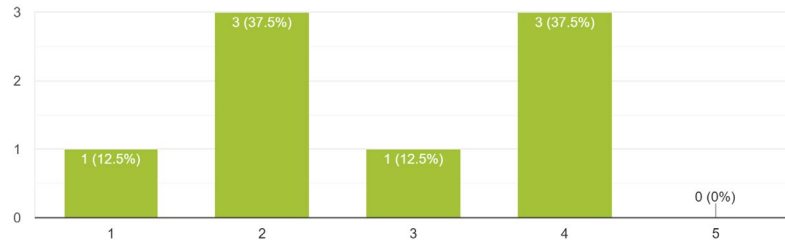
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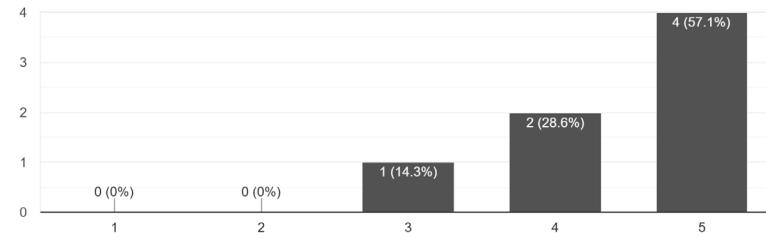
Are there provided rubrics to help evaluate key skills and understanding and provide feedback to students?

8 responses



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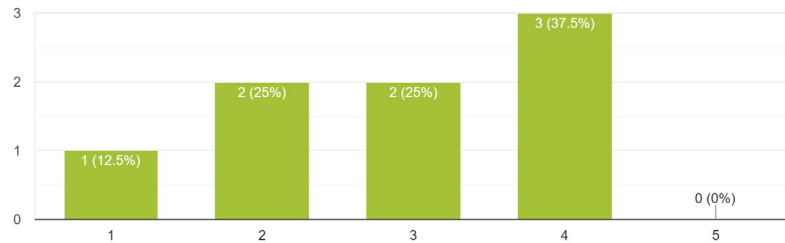
7 responses



## Teacher Materials and Usability

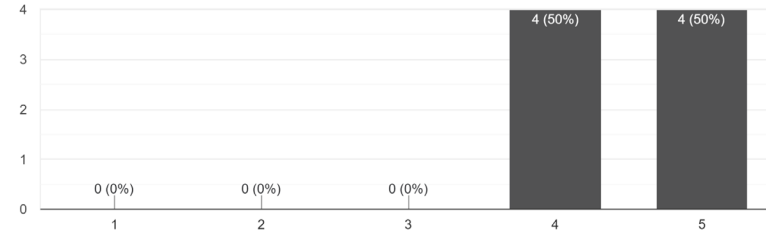
Are the teacher materials (print and digital) user-friendly and easy to navigate?

8 responses



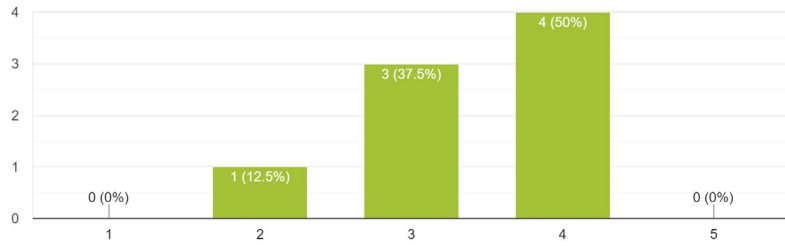
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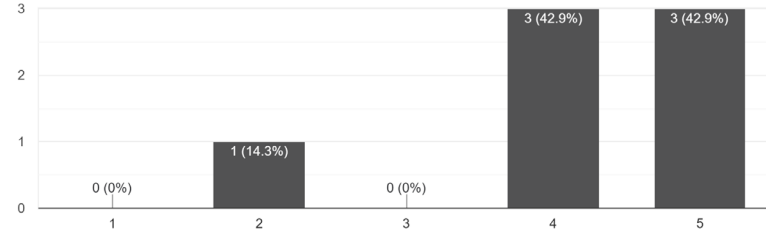
Do teacher guides include information about safety and material preparation?

8 responses



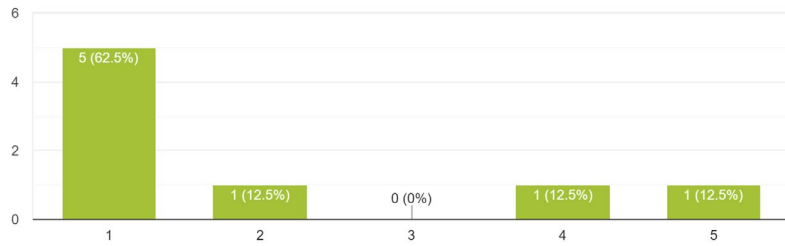
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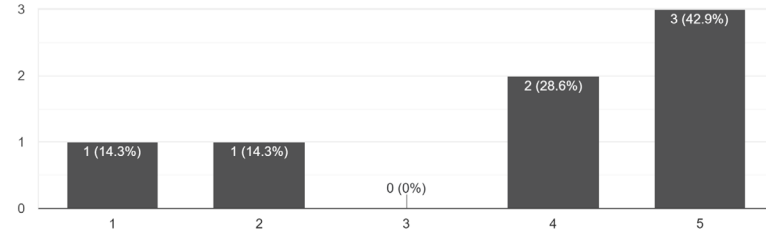
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8 responses



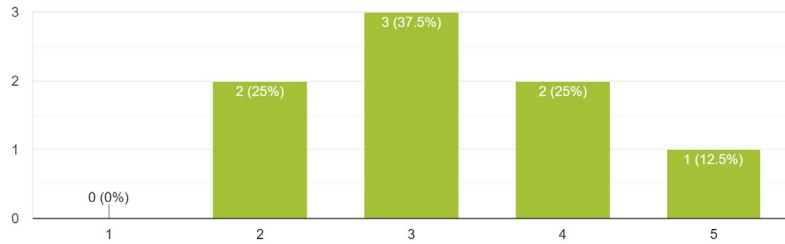
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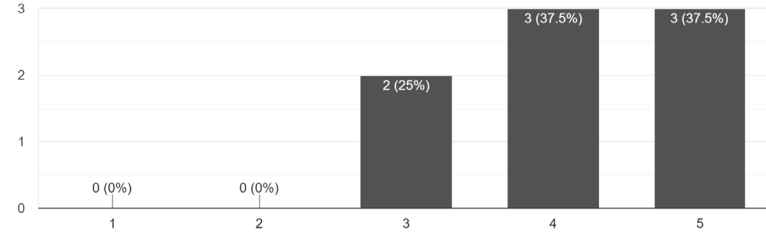
Was the provided training sufficient to support implementation of the curriculum?

8 responses



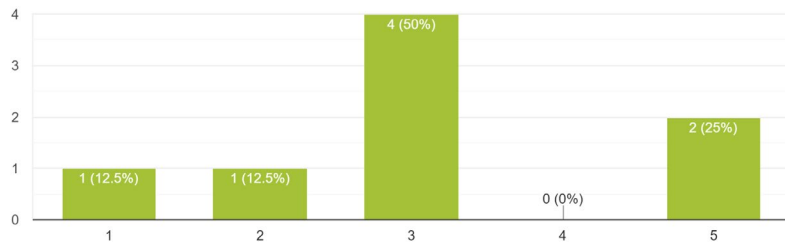
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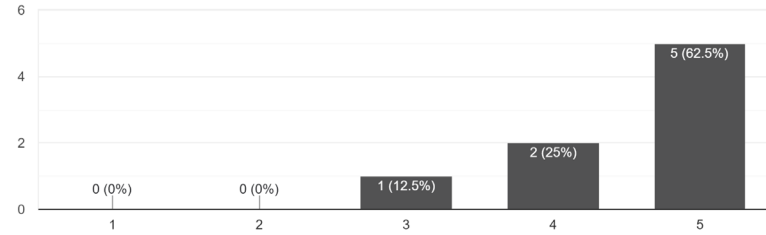
Were there opportunities to follow-up with a trainer or support provider while implementing the curriculum?

8 responses

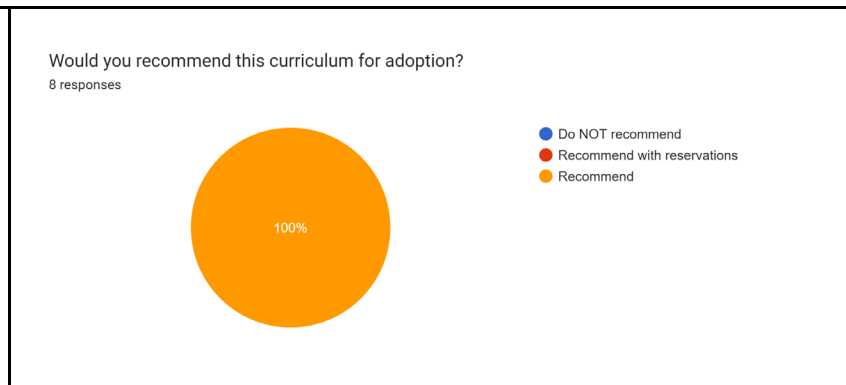
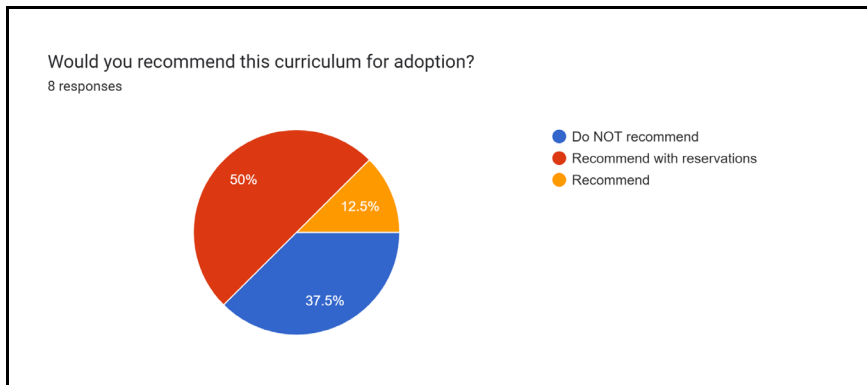


Were there opportunities to follow-up with a trainer or support provider while implementing the curriculum?

8 responses



Unofficial recommendation?



### Teacher Comments

BSCS
<p>This is a comprehensive curriculum that provides supports for students to practice their critical thinking skills. The one thing that needed is more labs but all of the other structures are present. I have supplemented labs to fill the need for more labs which has improved delivery of curriculum. I think overall with the readings, the concept maps, the opportunities for collaboration are all present and support student learning.</p>
<p>I do think in order to deliver this curriculum to students that teachers new to the curriculum need supports and training. but the anchor phenomenon and summative tasks are engaging for students overall. There is also space in the curriculum to supplement where needed to include more labs and activities so students are able to get more lab experiences throughout. I have added or changed the flow of lessons over time to include more wet labs.</p>
<p>Overall I would recommend this curriculum because it engages students and encourages 21st century skills. I think the summative tasks are relevant to students needs (Unit 1: Patient Advocacy Checklist is relevant and provides students</p>

Lab-Aids
<p>Is this the curriculum that OUSD is going to move forward with? We all hope so!!!!</p>
<p>This was a much better curriculum for my students. The texts they were reading were still challenging them but they weren't getting too lost in the science vocabulary. I saw my kids engage more with the activities provided in the curriculum like the sorting activities.</p>
<p>I have only been using this curriculum for a few weeks, so I am unsure about the extent to which this curriculum</p>

opportunities to make connections to science and their daily lives for example). I also think the structure allows for teachers to make appropriate modifications as needed to successfully implement in their classes.

This curriculum does take time to complete with fidelity. I really like Units 1,2, and 4. I have not been able to fully implement unit 3 due to time constraints. But the overall structure, standards, anchor phenomenon, readings, activities, are all relevant to students and support their learning.

Students really loved the bacteria growth lab from unit 1 and the patient assessment anchor from unit 2. In previous experiences, students were really engaged with the entire unit 4 (anything to do with animals is usually a big hit in the classroom) and the coyote investigation allowed me to search for concrete examples that were local to add to the curriculum.

As a teacher I appreciated the structure and the worksheets for students and the clarity in standards addressed explicitly throughout. I appreciated being able to share what modifications I made and being able to get feedback from students as we progressed throughout a unit. I was particularly proud of the final products from student's patient advocacy checklists - students presentations demonstrated a clear understanding of the learnings from the unit as well as how to use science to help improve their daily lives.

I liked getting better with the Driving Question Board activity

satisfies all constraints. Using the Lab-Aids curriculum has been a good experience so far.

I have not been able to implement this curriculum with my students as I was planning to start in Marking Period 5. However, the trainings were very interactive and included direct engagement with the materials which I appreciated.

I did try using some of the questions from the assessment bank provided in the cells unit and found using them to be extremely helpful for students and easy for me to grade as a teacher. I also took a lab to use with students. I thought the lab was successful and engaging with students.

This was the curriculum my colleagues were most excited about - specifically because there were so many labs incorporated into the curriculum. I believe the "Labsent" videos and the labs are a huge asset to the curriculum. I really liked the literacy supports provided in the student textbooks.

and working to make that a central piece for every unit. I think centering student questions is so important for centering student voice.

It'd be nice to have more hands-on materials and activities.

There are very few labs or hands on activities in BScS, these two things get kids engaged in science. The curriculum has too many readings that need to be additionally scaffolded so students can access them. Some of the phenomena drag on for too long and students lose interest (like the white kid Kyle who's sick, students were like "we don't give a crap about this guy).

The curriculum was engaging with hands on experiments. It

This curriculum is more developed (farther along in offering alternatives and supports for diverse learners). There are more digital and analog tools and resources in support of student learning than in BSCS. There are so many tools that teachers need time to figure out how to incorporate all of them. This curriculum can be more challenging to do together since it is so textbook based... I am still field testing this curriculum so I feel less fluent around the plethora of tools.

was very challenging for language learners- too much to get through, difficult for kids to comprehend / think /analyze and I had to create a lot of supports. But for native speakers, it's great!

There were no hands on activities among the materials and I had to add a lot of scaffolding

My classroom is a Mild/Moderate self-contained classroom. Some materials were building from prior knowledge and I had to teach the skills for my class which meant that we couldn't go over what was planned until they learned that certain skill. I would also say that the readings were too complex for my students and there needed to be a simpler version for my students.

This curriculum has a robust 4 unit sequence that covers the breadth and depth of NGSS but lacks some of the auxillary and modalities that support all learners.

[Summary of interviews and discussions after 22/23 field testing](#)


## Bio curriculum feedback

"RIGHT CLICK" (or "control + click" on a Mac) on this form and select "translate" to view the form in another language.

"HAGA CLIC DERECHO" (o "control + clic" en una Mac) en este formulario y seleccione "traducir" para ver el formulario en otro idioma.

في هذا النموذج وحدد "ترجمة" لعرض النموذج بلغة أخرى Mac انقر بزر الماوس الأيمن "أو"تحكم وانقر" في جهاز

在 Mac 上在此表單上“右鍵單擊”或“控制並單擊”，然後選擇“翻譯”以查看另一種語言的表單

This form is automatically collecting emails from all respondents. [Change settings](#)



Your school:

1. Castlemont
2. CCPA
3. Fremont
4. Madison Park
5. McClymonds
6. MetWest
7. Oakland Tech
8. Rudsdale
9. Skyline
10. Other



Grade:

- 9th
- 10th
- 11th
- 12th

What curriculum program are you rating?

If you're not sure, ask your teacher

- BSCS: Understanding for Life
- LabAids: Science and Global Issues - Biology

Overall, how would you rate this program? Would you recommend that OUSD use this program for all high school Biology classes?

	1	2	3	4	
Strongly DO NOT Recommend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Recommend

What did you like the MOST about the program?

Short answer text  
.....

What did you like the LEAST about the program?

Short answer text

---

How would you rate the curriculum in the following areas?

These are key skills that are important for science and engineering

Did you get regular opportunities to read, discuss with classmates, and write while your teacher was using this program?

	1	2	3	4	
Not at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very much

Did you get to develop and discuss interesting and driving questions?

	1	2	3	4	
Not at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very much

Did you get to **plan and carry out investigations**?

	1	2	3	4	
Not at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very much

Did you get to **analyze and interpret data**?

	1	2	3	4	
Not at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very much

Did you have to write **explanations, arguments, and claims that were based on evidence**?

	1	2	3	4	
Not at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very much

Anything else you would like to share?

Short answer text  
.....

# Attachment B: High School Biology Budget Proposal for Instructional Materials

Oakland Unified School District

February 2024

**Summary Table: Years 1-3, 2024-2027**

Year	Summary of Materials to be Purchased	Costs
<b>2024-25</b>	Lab-Aids portal Teacher Licenses Printed and bound teacher resources Lab-Aids portal Student Licenses Digital and print full-length Biology texts Material Kits	<b>\$958,884.85</b>
<b>2025-31</b>	Lab-Aids material Kits refills	<b>\$69, 823.78</b>
<b>2026-27</b>	Lab-Aids material Kits refills	<b>\$69, 823.78</b>
<b>TBD</b>	Lab-Aids material Kits refills	<b>\$69, 823.78</b>
<b>TBD</b>	Lab-Aids material Kits refills	<b>\$69, 823.78</b>
<b>TBD</b>	Lab-Aids material Kits refills	<b>\$69, 823.78</b>
<b>TBD</b>	Lab-Aids material Kits refills	<b>\$69, 823.78</b>
	<b>TOTAL =</b>	<b>\$1,377,827.53</b>

*\*This assumes that all consumable materials are used by every teacher each year and needs to be completely refurbished; annual cost will most likely be lower*

## Budget Proposal for 2023-24

Biology Lab-Aids Curriculum Implementation			
Instructional Material	Quantity	Price per unit	Total Cost
Online Access - Student Materials and Portal	2500	\$187.25	\$468,625.00
Student Books (class sets)	420	\$99.95	\$41,979.00
Teacher Curriculum Guides	31	\$75	\$2,325.00
Teacher Unit Guides	31	\$225	\$6,975.00
Material Kits (5 units)	31	\$9759.55	\$302,546.05
Online Access - Teacher Portal	35	\$799	\$27,965.00
<b>SUB TOTAL</b>			<b>\$850, 415.05</b>
Estimated Tax + Shipping	1	-	\$108, 469.80
<b>2023-24 TOTAL</b>			<b>\$958, 884.85</b>

## Budget Proposal for 2025-2027

Biology Lab-Aids Curriculum Implementation			
Instructional Material	Quantity	Price per unit	Total Cost
Annual Material Kits Refills*	31		
<b>2024-25 TOTAL</b>			<b>\$69,823.78</b>

*\*This assumes that all consumable materials are used by every teacher and needs to be completely refurbished; annual cost will most likely be lower*

**Attachment C:  
High School Biology Budget Proposal for  
Ongoing Professional Learning**

# Oakland Unified School District

March 2024

## Summary Table: Years 1-3, 2024-2027

Year	Summary of Professional Learning Offerings	Costs
<b>2024-25</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days <i>Spring 2024 Chemistry Pilot</i>	<b>\$155,900.00</b>
<b>2025-26</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days <i>Curriculum training for trainers PD</i>	<b>\$154,900.00</b>
<b>2026-27</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days <i>Curriculum training for trainers PD</i>	<b>\$109,900.00</b>
<b>TBD</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days Science Teacher Lead/Coaching Collaborative	<b>\$95,000.00</b>
<b>TBD</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series	<b>\$95,000.00</b>

	September & January PD Days Science Teacher Lead/Coaching Collaborative	
<b>TBD</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days Science Teacher Lead/Coaching Collaborative	<b>\$95,000.00</b>
<b>TBD</b>	Lab-Aids Professional Learning and Train the Trainer Services Standards & Equity Institute Foundational Curriculum Training Monthly 2nd Wednesday Series September & January PD Days Science Teacher Lead/Coaching Collaborative	<b>\$95,000.00</b>
	<b>TOTAL =</b>	<b>\$800,700.00</b>



## Budget Proposal for 2024-25

Professional Learning	Purpose	Quantity	Price per unit	Total Cost
<b>2024 - 2025 (timing varies):</b> Lab-Aids unit training and other PL throughout the year	Lab-Aids will provide training around the online portal (integrated into Clever) that host materials for implementation. There will also be extensive professional learning around the five full units that make up the Biology curriculum.	6 sessions 35 Teachers	\$1800/session* + 63000  Teachers Stipends: \$50/hour x 36 hrs = \$1800.00 per person  <i>*Discounted rate from vendor for 24/25 only</i>	\$73,800.00
<b>May 2025:</b> Focused Curriculum training	Prepare Biology teachers to implement Lab-Aids curriculum in 2024-25.	2 sessions 35 Teachers	\$1800/session + 21000  Teacher Stipends: \$50/hour x 12 hrs = \$600 per person	\$24,600.00
<b>August 2025:</b> Training embedded in 9-12 Standards & Equity Institutes	Prepare Biology teachers to implement Lab-Aids curriculum in 2024-25. Prepare grades chemistry teachers with fundamental mindsets and practices that will support their implementation of curriculum in future years.	35 teachers	<b>Teacher Stipends + cost of PL facilitators</b>  <i>*These costs are already reflected in annual planning for summer Standards and Equity institutes.</i>	\$45,500.00
<b>Professional Learning Days in September and January:</b> Cross-site collaboration facilitated by HS Science Coordinator	Backwards plan units and lessons. Engage in shared learning around instructional routines to foster student discourse and equitable participation.	35 teachers and leads	\$0	\$0
<b>2024 - 25: Monthly 2nd Weds Sessions</b>	Best practices that support curriculum implementation.	35 teachers and leads	\$0	\$0
<b>Spring 2025 Chemistry and Physics Pilot</b>	Stipend a small group of Chemistry and Physics teachers to review and test materials. Stipends reflect additional planning time and time to offer feedback.	20 teachers	\$50/hour x 12 hrs = \$600.00 per person	\$12,000.00

<b>TOTAL</b>	<b>\$155,900.00</b>
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### Budget Proposal for 2025-26

Professional Learning	Purpose	Quantity	Price per unit	Total Cost
<b>2025 - 2026 (timing varies):</b> Lab-Aids unit training and other PL throughout the year	Lab-Aids will provide training around the online portal (integrated into Clever) that host materials for implementation. There will also be extensive professional learning around the five full units that make up the Biology curriculum.	4 sessions 35 Teachers	\$2800/session + 63000  Teachers Stipends: \$50/hour x 36 hrs = \$1800 per person	\$74,200.00
<b>2025 - 2026 (timing varies):</b> Lab-Aids “train the trainer” PL	Lab-Aids will provide training for leads who will support teachers around professional learning around the five full units that make up the Biology curriculum.	2 session 5 Teachers	\$2800/session + \$3000  Teacher Stipends: \$50/hour x 12 hrs = \$600 per person	\$8,600.00
<b>May 2026:</b> Focused Curriculum training	Continued support for Biology teachers to implement Lab-Aids curriculum	2 sessions 35 Teachers	\$2800/session + 21000  Teacher Stipends: \$50/hour x 12 hrs = \$600 per person	\$26,600.00
<b>August 2026:</b> Training embedded in 9-12 Standards & Equity Institutes	Continued support for teacher to implement curriculum	35 teachers	<b>Teacher Stipends + cost of PL facilitators</b>  <i>*These costs are already reflected in annual planning for summer Standards and Equity institutes.</i>	\$45,500.00
<b>Professional Learning Days in September and January:</b> Cross-site collaboration facilitated by HS Science Coordinator	Backwards plan units and lessons. Engage in shared learning around instructional routines to foster student discourse and equitable participation.	35 teachers and leads	\$0	\$0
<b>2025 - 26: Monthly 2nd Weds Sessions</b>	Best practices that support curriculum implementation.	35 teachers and leads	\$0	\$0

<b>TOTAL</b>	<b>\$154,900.00</b>
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### Budget Proposal for 2026-27

Professional Learning	Purpose	Quantity	Price per unit	Total Cost
<b>2026 - 2027 (timing varies):</b> Lab-Aids unit training and other PL throughout the year	Lab-Aids will provide training around the online portal (integrated into Clever) that host materials for implementation. There will also be extensive professional learning around the five full units that make up the Biology curriculum.	4 sessions 10 Teachers	\$2800/session + 18000  Teachers Stipends: \$50/hour x 36 hrs = \$1800 per person  <i>*based on projected yearly turnover</i>	\$29,200.00
<b>2026 - 2027 (timing varies):</b> Lab-Aids “train the trainer” PL	Lab-Aids will provide training for leads who will support teachers around professional learning around the five full units that make up the Biology curriculum.	2 session 5 Teachers	\$2800/session + \$3000  Teacher Stipends: \$50/hour x 12 hrs = \$600 per person	\$8,600.00
<b>May 2027:</b> Focused Curriculum training	Continued support for Biology teachers to implement Lab-Aids curriculum	2 sessions 35 Teachers	\$2800/session + 21000  Teacher Stipends: \$50/hour x 12 hrs = \$600 per person	\$26,600.00
<b>August 2027:</b> Training embedded in 9-12 Standards & Equity Institutes	Continued support for teacher to implement curriculum	35 teachers	<b>Teacher Stipends + cost of PL facilitators</b>  <i>*These costs are already reflected in annual planning for summer Standards and Equity institutes.</i>	\$45,500.00
<b>Professional Learning Days in September and January:</b> Cross-site collaboration facilitated by HS Science Coordinator	Backwards plan units and lessons. Engage in shared learning around instructional routines to foster student discourse and equitable participation.	35 teachers and leads	\$0	\$0
<b>2026 - 27: Monthly 2nd Weds Sessions</b>	Best practices that support curriculum implementation.	35 teachers and leads	\$0	\$0

				<b>TOTAL</b>
				<b>\$109,900.00</b>

## Budget Proposal (TBD)

Professional Learning	Purpose	Quantity	Price per unit	Total Cost
<b>TBD (timing varies):</b> Lab-Aids unit training and other PL throughout the year	Lab-Aids will provide training around the online portal (integrated into Clever) that host materials for implementation. There will also be extensive professional learning around the five full units that make up the Biology curriculum.	4 sessions  10 Teachers	\$2800/session + 18000  Teachers Stipends: \$50/hour x 36 hrs = \$1800 per person  <i>*based on projected yearly turnover</i>	\$29,200.00
<b>TBD (timing varies):</b> Lab-Aids “train the trainer” PL	Lab-Aids will provide training for leads who will support teachers around professional learning around the five full units that make up the Biology curriculum.	2 session  5 Teachers	\$2800/session + \$3000  Teacher Stipends: \$50/hour x 12 hrs = \$600 per person	\$8,600.00
<b>TBD:</b> Focused Curriculum training	Continued support for Biology teachers to implement Lab-Aids curriculum - <i>OUSD leads co-facilitate</i>	2 sessions  5 leads  35 Teachers	4500 + 7200 Teacher Lead prep stipends: \$50/hour x 18 hrs = \$900 per lead  Teacher Stipends: \$50/hour x 12 hrs = \$600 per person	\$11,700.00
<b>TBD:</b> Training embedded in 9-12 Standards & Equity Institutes	Continued support for teacher to implement curriculum	35 teachers	<b>Teacher Stipends + cost of PL facilitators</b>  <i>*These costs are already reflected in annual planning for summer Standards and Equity institutes.</i>	\$45,500.00
<b>Professional Learning Days in September and January:</b> Cross-site collaboration facilitated	Backwards plan units and lessons. Engage in shared learning around instructional routines to foster student discourse and equitable	35 teachers and leads	\$0	\$0

by HS Science Coordinator	participation.			
<b>TBD: Monthly 2nd Weds Sessions</b>	Best practices that support curriculum implementation.	35 teachers and leads	\$0	\$0
<b>High School Science Coach Collaborative</b>	Monthly collaborative to support teacher leaders from each site to coordinate and facilitate collaboration around the implementation of new curriculum.	5 coaches	\$0 (embedded in work day)	\$0
<b>TOTAL</b>				<b>\$95,000 .00</b>

## Budget Proposal (TBD)

Professional Learning	Purpose	Quantity	Price per unit	Total Cost
<b>TBD (timing varies):</b> Lab-Aids unit training and other PL throughout the year	Lab-Aids will provide training around the online portal (integrated into Clever) that host materials for implementation. There will also be extensive professional learning around the five full units that make up the Biology curriculum.	4 sessions 10 Teachers	\$2800/session + 18000  Teachers Stipends: \$50/hour x 36 hrs = \$1800 per person  <i>*based on projected yearly turnover</i>	\$29,200.00
<b>TBD (timing varies):</b> Lab-Aids “train the trainer” PL	Lab-Aids will provide training for leads who will support teachers around professional learning around the five full units that make up the Biology curriculum.	2 session 5 Teachers	\$2800/session + \$3000  Teacher Stipends: \$50/hour x 12 hrs = \$600 per person	\$8,600.00
<b>TBD:</b> Focused Curriculum training	Continued support for Biology teachers to implement Lab-Aids curriculum - <i>OUSD leads co-facilitate</i>	2 sessions 5 leads 35 Teachers	4500 + 7200 Teacher Lead prep stipends: \$50/hour x 18 hrs = \$900 per lead  Teacher Stipends: \$50/hour x 12 hrs = \$600 per person	\$11,700.00
<b>TBD:</b> Training embedded in 9-12 Standards & Equity Institutes	Continued support for teacher to implement curriculum	35 teachers	<b>Teacher Stipends + cost of PL facilitators</b>  <i>*These costs are already reflected in annual planning for summer Standards and Equity institutes.</i>	\$45,500.00
<b>Professional Learning Days:</b> Cross-site collaboration facilitated by HS Science Coordinator	Backwards plan units and lessons. Engage in shared learning around instructional routines to foster student discourse and equitable participation.	35 teachers and leads	\$0	\$0
<b>TBD: Monthly 2nd Weds Sessions</b>	Best practices that support curriculum implementation.	35 teachers and leads	\$0	\$0

<b>TBD High School Science Coach Collaborative</b>	Monthly collaborative to support teacher leaders from each site to coordinate and facilitate collaboration around the implementation of new curriculum.	5 coaches	\$0 (embedded in work day)	\$0
<b>TOTAL</b>				<b>\$95,000.00</b>

## Budget Proposal (TBD)

Professional Learning	Purpose	Quantity	Price per unit	Total Cost
<b>TBD: (timing varies):</b> Lab-Aids unit training and other PL throughout the year	Lab-Aids will provide training around the online portal (integrated into Clever) that host materials for implementation. There will also be extensive professional learning around the five full units that make up the Biology curriculum.	4 sessions 10 Teachers	\$2800/session + 18000  Teachers Stipends: \$50/hour x 36 hrs = \$1800 per person  <i>*based on projected yearly turnover</i>	\$29,200.00
<b>TBD: (timing varies):</b> Lab-Aids “train the trainer” PL	Lab-Aids will provide training for leads who will support teachers around professional learning around the five full units that make up the Biology curriculum.	2 session 5 Teachers	\$2800/session + \$3000  Teacher Stipends: \$50/hour x 12 hrs = \$600 per person	\$8,600.00
<b>TBD:</b> Focused Curriculum training	Continued support for Biology teachers to implement Lab-Aids curriculum - <i>OUSD leads co-facilitate</i>	2 sessions 5 leads 35 Teachers	4500 + 7200 Teacher Lead prep stipends: \$50/hour x 18 hrs = \$900 per lead  Teacher Stipends: \$50/hour x 12 hrs = \$600 per person	\$11,700.00
<b>TBD:</b> Training embedded in 9-12 Standards & Equity Institutes	Continued support for teacher to implement curriculum	35 teachers	<b>Teacher Stipends + cost of PL facilitators</b>  <i>*These costs are already reflected in annual planning for summer Standards and Equity institutes.</i>	\$45,500.00
<b>TBD: Professional Learning Days:</b> Cross-site collaboration facilitated by HS Science Coordinator	Backwards plan units and lessons. Engage in shared learning around instructional routines to foster student discourse and equitable participation.	35 teachers and leads	\$0	\$0
<b>TBD: Monthly 2nd Weds Sessions</b>	Best practices that support curriculum implementation.	35 teachers and leads	\$0	\$0



<b>TBD: High School Science Coach Collaborative</b>	Monthly collaborative to support teacher leaders from each site to coordinate and facilitate collaboration around the implementation of new curriculum.	5 coaches	\$0 (embedded in work day)	\$0
<b>TOTAL</b>				<b>\$95,000.00</b>

## Budget Proposal (TBD)

Professional Learning	Purpose	Quantity	Price per unit	Total Cost
<b>TBD (timing varies):</b> Lab-Aids unit training and other PL throughout the year	Lab-Aids will provide training around the online portal (integrated into Clever) that host materials for implementation. There will also be extensive professional learning around the five full units that make up the Biology curriculum.	4 sessions 10 Teachers	\$2800/session + 18000  Teachers Stipends: \$50/hour x 36 hrs = \$1800 per person  <i>*based on projected yearly turnover</i>	\$29,200.00
<b>TBD (timing varies):</b> Lab-Aids “train the trainer” PL	Lab-Aids will provide training for leads who will support teachers around professional learning around the five full units that make up the Biology curriculum.	2 session 5 Teachers	\$2800/session + \$3000  Teacher Stipends: \$50/hour x 12 hrs = \$600 per person	\$8,600.00
<b>TBD:</b> Focused Curriculum training	Continued support for Biology teachers to implement Lab-Aids curriculum - <i>OUSD leads co-facilitate</i>	2 sessions 5 leads 35 Teachers	4500 + 7200 Teacher Lead prep stipends: \$50/hour x 18 hrs = \$900 per lead  Teacher Stipends: \$50/hour x 12 hrs = \$600 per person	\$11,700.00
<b>TBD:</b> Training embedded in 9-12 Standards & Equity Institutes	Continued support for teacher to implement curriculum	35 teachers	<b>Teacher Stipends + cost of PL facilitators</b>  <i>*These costs are already reflected in annual planning for summer Standards and Equity institutes.</i>	\$45, 500
<b>TBD: Professional Learning Days:</b> Cross-site collaboration facilitated by HS Science Coordinator	Backwards plan units and lessons. Engage in shared learning around instructional routines to foster student discourse and equitable participation.	35 teachers and leads	\$0	\$0
<b>TBD: Monthly 2nd Weds Sessions</b>	Best practices that support curriculum implementation.	35 teachers and leads	\$0	\$0

<b>TBD: High School Science Coach Collaborative</b>	Monthly collaborative to support teacher leaders from each site to coordinate and facilitate collaboration around the implementation of new curriculum.	5 coaches	\$0 (embedded in work day)	\$0
<b>TOTAL</b>				<b>\$95,000.00</b>

Appendix K - Lab-Aids Price Quotes: Initial Purchase + Professional Learning



**QUOTE**

Quote #	Quote Date	Page
90008681	12/18/2023	1

Quote good for 90 days  
LAB-AIDS terms: Net 30 days

**Bill To:**

Oakland Unified School District  
Oakland USD - Accts Pay  
1000 Broadway, Ste. 680  
Oakland, CA 94607  
US

**Ship To:**

Attn: Christopher Junsay  
Oakland Unified School District  
1000 Broadway Ste 300  
Oakland, CA 94607  
USA

Quote Expires  
03/17/2024

Questions? Contact: Dr. Susan Paulsen, Sales Representative at 631-615-4668 or spaulsen@lab-aids.com

*Upon purchase of curriculum and/or Portal subscription, a School/District Administrator must be identified and will be responsible for student and teacher license distribution. The Administrator will receive login details from Lab-Aids when that person is identified by the Customer.*

REFERENCE NUMBER	TERMS	SHIP VIA		F.O.B. POINT
REV B	ET 30	PS - Ground		RONKONKOMA, NY
REQUESTED BY	SALES REPRESENTATIVE	QUOTE DATE	OUR QUOTE #	CUSTOMER ID
	SUSAN PAULSEN	12/18/2023	90008681	OAU001

LN	DL	ORDER QUANTITY	DUE DATE	PART IDENTIFIER	DESCRIPTION	UNIT PRICE	EXTENDED PRICE
					COMMENTS		
01	01	420.00	12/19/2023	SGI-B3SB	SCIENCE & GLOBAL ISSUES BIOLOGY, THIRD Edition STUDENT BOOK	99.95	41979.00
01	02	2500.00	12/19/2023	SGI-B3SB	SCIENCE & GLOBAL ISSUES BIOLOGY, THIRD Edition STUDENT BOOK	99.95	249875.00
02	01	2500.00	12/19/2023	SGI-B-3OLSP-7	SBI BIOLOGY, 3rd Edition, ONLINE PORTAL FOR STUDENTS, 7-YEARS	87.50	218750.00
03	01	31.00	12/19/2023	SGI-B3TE	SBI BIOLOGY, 3rd EDITION, TEACHER'S EDITIONS (FULL COURSE)	225.00	6975.00
04	01	31.00	12/19/2023	SGI-B3TR	SBI BIOLOGY TEACHERS RESOURCES, THIRD EDITION	75.00	2325.00
05	01	31.00	12/19/2023	SGI-B-3000NC	SCIENCE AND GLOBAL ISSUES BIOLOGY, 3rd EDITION EQUIPMENT PACKAGE WITH ONLINE TEACHER PORTAL (NO CART)	9759.55	302546.05
06	01	35.00	12/19/2023	SGI-B-3OLTP-7	SBI BIOLOGY, 3rd Edition, ONLINE PORTAL FOR TEACHERS, 7-YEARS	799.00	27965.00
07	01	8.00	12/19/2023	PDS-001	PROFESSIONAL LEARNING SERVICES Full Day Grade Level Specific Implementation Training	1800.00	14400.00
08	01	1.00	12/19/2023	S/H FROM 12% TO 7%		42259.00	42259.00
09	01	1.00	12/19/2023	10.25% TAX		66210.80	66210.80
						Total.....	973,284.85

S/H AND TAX DOES NOT  
INCLUDE PORTALS & PL

www.lab-aids.com  
Interested in Professional Development:  
<http://lab-aids.com/professional-development>  
Page 1 of 1

Orders can be faxed or mailed to: 631-737-1286  
LAB-AIDS, Inc.  
17 Colt Court  
Ronkonkoma, NY 11779  
customerservice@lab-aids.com

Yearly refill costs



Proven Science Programs

**QUOTE**

Quote #	Quote Date	Page
90010150	12/18/2023	1

Quote good for 90 days  
LAB-AIDS terms: Net 30 days

**Bill To:**

Oakland Unified School District  
Oakland USD - Accts Pay  
1000 Broadway, Ste. 680  
Oakland, CA 94607  
US

**Ship To:**

Attn: Christopher Junsay  
Oakland Unified SD  
900 High Street, STEM Office  
Oakland, CA 94601  
US

Quote Expires  
03/17/2024

Questions? Contact: Dr. Susan Paulsen, Sales Representative at 631-615-4668 or spaulsen@lab-aids.com

*Upon purchase of curriculum and/or Portal subscription, a School/District Administrator must be identified and will be responsible for student and teacher license distribution. The Administrator will receive login details from Lab-Aids when that person is identified by the Customer.*

REFERENCE NUMBER	TERMS	SHIP VIA	F.O.B. POINT	
	ET 30	PS - Ground	RONKONKOMA, NY	
REQUESTED BY	SALES REPRESENTATIVE	QUOTE DATE	OUR QUOTE #	CUSTOMER ID
	SUSAN PAULSEN	12/18/2023	90010150	OAU001

LN	DL	ORDER QUANTITY	DUE DATE	PART IDENTIFIER	DESCRIPTION	UNIT PRICE	EXTENDED PRICE
					COMMENTS		
01	01	8.00	12/18/2023	IAES-B001	120mL ORGANIC MATTER TEST SOLUTION, (0.2M KMNO4)	9.90	79.20
02	01	1.00	12/18/2023	IAES-P001	1500 cc IAES SOILA	29.70	29.70
03	01	1.00	12/18/2023	IAES-P002	1500 cc IAES SOIL B	29.70	29.70
04	01	1.00	12/18/2023	SMS-P018	ALUMINUM FOIL ROLL, 75x1'	7.40	7.40
05	01	1.00	12/18/2023	SGL-B031	SODIUM BICARBONATE, POWDER, 25G	6.50	6.50
06	01	9.00	12/18/2023	SGL-B002	30mL PHENOL RED	6.50	58.50
07	01	8.00	12/18/2023	SGL-B040	60 mL SALT SOLUTION 5%	8.60	68.80
08	01	1.00	12/18/2023	803S-B01E	15mL SODIUM HYDROXIDE, 0.05M, #803S	6.15	6.15
09	01	1.00	12/18/2023	SEED20	BEAN, FORDHOOK BUSH 1# APPROX. 960 SEEDS	16.90	16.90
10	01	1.00	12/18/2023	SGL-P049	FILTERS, BLUE, GREEN AND RED, 5x7", PK OF 4 EACH	13.60	13.60
11	01	1.00	12/18/2023	TA-009A	MASKING TAPE, 1". 60 YARDS	3.70	3.70
12	01	1.00	12/18/2023	FA-SWX40	STRAWS,WRPD,PLASTIC-40/PK	8.60	8.60
13	01	1.00	12/18/2023	SGL-LM35	VOUCHER FOR PREPAID PLANKTON, LIVE CULTURE SGI: BIOLOGY, 3RD EDITION	40.00	40.00

SIH IS TAXABLE IN CA

[www.lab-aids.com](http://www.lab-aids.com)

Page 1 of 3

Interested in Professional Development:  
<http://lab-aids.com/professional-development>

Orders can be faxed or mailed to: 631-737-1286  
LAB-AIDS, Inc.  
17 Colt Court  
Ronkonkoma, NY 11779  
[customerservice@lab-aids.com](mailto:customerservice@lab-aids.com)



**QUOTE**

Quote #	Quote Date	Page
90010150	12/18/2023	2

Quote good for 90 days  
LAB-AIDS terms: Net 30 days

**Bill To:**

Oakland Unified School District  
Oakland USD - Accts Pay  
1000 Broadway, Ste. 680  
Oakland, CA 94607  
US

**Ship To:**

Attn: Christopher Junsay  
Oakland Unified SD  
900 High Street, STEM Office  
Oakland, CA 94601  
US

Quote Expires  
03/17/2024

Questions? Contact: Dr. Susan Paulsen, Sales Representative at 631-615-4668 or spaulsen@lab-aids.com

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REFERENCE NUMBER	TERMS	SHIP VIA	F.O.B. POINT	
	ET 30	PS - Ground	RONKONKOMA, NY	
REQUESTED BY	SALES REPRESENTATIVE	QUOTE DATE	OUR QUOTE #	CUSTOMER ID
	SUSAN PAULSEN	12/18/2023	90010150	OAU001

LN	DL	ORDER QUANTITY	DUE DATE	PART IDENTIFIER	DESCRIPTION	UNIT PRICE	EXTENDED PRICE
					COMMENTS		
14	01	1.00	12/18/2023	SGI-P044	STICKY NOTES, ASSORTED 1-3/8x1-7/8", 100/PK (POST ITS)	1.60	1.60
15	01	1.00	12/18/2023	GS-005	GLASS COVER SLIPS, PK/30	3.70	3.70
16	01	1.00	12/18/2023	TA-009A	MASKING TAPE, 1". 60 YARDS	3.70	3.70
17	01	8.00	12/18/2023	SS-1B17E	METHYL CELLULOSE SOLUTION DROP CONTROL, 15 ml	4.65	37.20
18	01	1.00	12/18/2023	SGI-LM37	VOUCHER FOR PREPAID AQUATIC PLANTS (LUDWIGIA AND ELODEA) SGI: BIOLOGY, 3RD EDITION	85.00	85.00
19	01	1.00	12/18/2023	TA-009A	MASKING TAPE, 1". 60 YARDS	3.70	3.70
20	01	7.00	12/18/2023	C1-1-37E	AGAR, 125 mL	11.15	78.05
21	01	1.00	12/18/2023	SGI-P042	ANTIBIOTIC SENSITIVITY DISKS, 160/PK	10.45	10.45
22	01	15.00	12/18/2023	DR-010S	TRANSFER PIPET, STERILE, 5mL, GRADUATED TO 1mL	0.30	4.50
23	01	5.00	12/18/2023	WH-GBX2	BAGS, RESEALABLE 9 X 12" 2/PK	2.40	12.00
24	01	1.00	12/18/2023	SMS-B023	200 g SODIUM BICARBONATE	8.60	8.60
25	01	2.00	12/18/2023	C1-SIX20	SWABS, STERILE, PK/20	7.70	15.40
26	01	2.00	12/18/2023	SGI-PD25	PETRI DISH, STERILE, 100MM PLASTIC, PK/25	12.05	24.10

S/H IS TAXABLE IN CA

[www.lab-aids.com](http://www.lab-aids.com)

Interested in Professional Development:  
<http://lab-aids.com/professional-development>

Page 2 of 3

Orders can be faxed or mailed to: 631-737-1286  
LAB-AIDS, Inc.  
17 Colt Court  
Ronkonkoma, NY 11779  
[customerservice@lab-aids.com](mailto:customerservice@lab-aids.com)



**QUOTE**

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90010150	12/18/2023	3

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	ET 30	PS - Ground	RONKONKOMA, NY	
REQUESTED BY	SALES REPRESENTATIVE	QUOTE DATE	OUR QUOTE #	CUSTOMER ID
	SUSAN PAULSEN	12/18/2023	90010150	OAU001

LN	DL	ORDER QUANTITY	DUE DATE	PART IDENTIFIER	DESCRIPTION	UNIT PRICE	EXTENDED PRICE
					COMMENTS		
27	01	5.00	12/18/2023	SGI-LM36	VOUCHER FOR PREPAID STERILE AND PERISHABLE LAB MATERIALS FOR CREATING GENETICALLY MODIFIED BACTERIA, SGI 3RD ED.	182.00	910.00
28	01	10.00	12/18/2023	WH-GBX2	BAGS, RESEALABLE 9 X 12" 2/PK	2.40	24.00
29	01	1.00	12/18/2023	SGI-B024	AGAR, POWDERED, 18G	9.65	9.65
30	01	8.00	12/18/2023	SGI-B045	30 mL DNA SAMPLE FROM GENETICALLY MODIFIED CANOLA	6.50	52.00
31	01	8.00	12/18/2023	SGI-B021	30mL GLYCERIN	6.50	52.00
32	01	8.00	12/18/2023	SGI-B041	15 mL SAMPLE A: FARMER GREEN'S WEEDS	4.60	36.80
33	01	8.00	12/18/2023	SGI-B042	15 mL SAMPLE B: WEEDS W/O HERBICIDE RESISTANCE	4.60	36.80
34	01	8.00	12/18/2023	SGI-B043	15 mL SAMPLE C: WEEDS W/HERBICIDE RESISTANCE	4.60	36.80
35	01	1.00	12/18/2023	IAES-B004	2.5 X 1 1/4" VIAL BAKING SODA	5.15	5.15
36	01	1.00	12/18/2023	12% S/H		218.40	218.40
37	01	1.00	12/18/2023	10.5% TAX		214.03	214.03
						Total.....	2,252.38

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