

2000010 - M/J Life Science

Issues and Science Life

Lab-Aids

Publisher's Questionnaire

**Authors & Credentials: List full name of author(s), with major or senior author listed first. Briefly provide credentials for each author.**

Science Education for Public Understanding Program (SEPUP), University of California Berkeley

Barbara Nagle - Barbara Nagle has a bachelor's degree in molecular biology from Wellesley College and a Ph.D. in cell biology from the University of Pennsylvania. She conducted postdoctoral research on cell division and cell motility at UC Berkeley. Before joining SEPUP, Barbara taught high school chemistry in Oakland, California and college level biology courses at the University of Pennsylvania and UC Berkeley. Her published products, developed in collaboration with the SEPUP team, include a complete middle school science series that includes Issues and Earth Science, Issues and Life Science, and Issues and Physical Science, and two high school courses titled Science and Sustainability and Science and Global Issues: Biology. She is currently Co-PI of the NSF-funded DRK-12 project Moving Next Generation Science Standards into Practice: A Middle School Ecology Unit and Teacher Professional Development Model, a collaboration between the American Museum of Natural History, the University of Connecticut, and the Lawrence Hall of Science. She is also PI of a grant funded by the Carnegie Corporation of New York to develop summative assessments for the middle school Next Generation Science Standards.

Manisha Hariani - Since first joining SEPUP in 1996, Manisha has collaborated on as well as led many projects at SEPUP. She co-authored the original Issues and Life Science middle school course, and has written units for Issues and Earth Science, Issues and Physical Science, Science and Sustainability, Science and Global Issues: Biology, the SEPUP high school modules, and Moving Next Generation Science Standards into Practice: A Middle School Ecology Unit and Teacher Professional Development Model. Her work has included managing curriculum projects, conducting teacher workshops, developing authentic assessments, and collaborating with school districts across the country. Manisha has a bachelor's degree in Biology and Philosophy from Miami University of Ohio and a master's degree in Secondary Education from the University of Akron, Ohio. She began her career teaching middle school and high school, and has taught in Ohio, Virginia, and California.

Wendy Jackson -Wendy Jackson is a Curriculum Developer with SEPUP, and was a lead author on several of the Issues and Science units redesigned for the NGSS. Currently she is co-coordinating the redesign of Science and Global Issues, and is the lead developer on the Ecology and Evolution units. Wendy came to SEPUP in 2015 from DePaul University where she served as Director of the DePaul-Chicago Public Schools (CPS) Science Partnership. This partnership provided support for K-12 science teachers, as well as school and district administrators, as they implemented the NGSS. Previously she had been the Middle Grade Science Specialist for CPS, responsible for supporting the implementation of SEPUP, facilitating professional development on SEPUP curriculum, and developing a cadre of professional development leaders drawn from the ranks of outstanding middle grade science teachers. Wendy came

to K-12 education through an alternative certification program at the University of Illinois at Chicago, and was an NSF Noyce Scholar, before spending five years as a middle grade science teacher in CPS, where she used SEPUP in her own classroom. Wendy received a Ph.D. in Ecology from the University of Washington, having conducted her dissertation research in Kenya, and was a faculty member at the University of Illinois at Chicago. In addition to conducting ecological research, she directed several programs to build capacity for promoting environmental and conservation programs both abroad and in Chicago. Wendy also served as an AAAS Science and Technology Policy Fellow at the U.S. Agency for International Development as the Environmental Policy Specialist for the Offices of the Science Advisor and Research.

Tim Hurt - Tim first collaborated with SEPUP curriculum developers in 2012 to develop hands-on, informal science and engineering curriculum for middle and high school students in Saudi Arabia. Since that time, Tim has worked for SEPUP on a number of projects including the development of the Issues and Science middle school units redesigned for the NGSS. Tim began his career at the Lawrence Hall of Science in 2010 while completing his undergraduate degree in physics at UC Berkeley. He has since worked for a number of different departments within the Lawrence Hall of Science, including SEPUP, and completed his Masters of Information and Data Science (MIDS) at UC Berkeley. Currently, his work focuses on how to better leverage, and improve access to, digital technologies in informal and formal science and engineering education contexts.

Maia Binding - Maia began her career in education teaching high school biology and other science and literacy skills courses in San Francisco, California. She also served as Department Chair before moving on to work at the district level, developing and executing professional development workshops for all of the district's middle and high school science teachers. Maia joined the SEPUP team in 2007. Her published products include several units in middle school science series Issues and Life Science and Issues and Physical Science, and the high school course Science and Global Issues: Biology. She is currently Director of the San Francisco/Bay Area Center for the Amgen Biotech Experience, a program that provides professional development, curriculum, and materials for Bay Area teachers to teach biotechnology. She is also project manager for the NSF-funded DRK-12 project Moving Next Generation Science Standards into Practice: A Middle School Ecology Unit and Teacher Professional Development Model, and for a grant funded by the Carnegie Corporation of New York to develop summative assessments for the middle school Next Generation Science Standards. Additionally, she is in her ninth year of directing a series of projects to develop hands-on, informal science programs for middle and high school students in Saudi Arabia, including delivering professional development for teachers from Saudi Arabia delivered both at the Hall and in Saudi Arabia. Maia holds a bachelor's degree in Integrative Biology from the University of California, Berkeley, and a master's degree in Animal Sciences from the University of Hawaii, Manoa.

Janet Bellantoni -Janet has been the lead designer for over twenty SEPUP curricula units in physical science, physics, earth science, space science, and engineering. She contributed to the initial creation of SEPUP's middle school course, Issues and Earth Science, as the Project Coordinator, Field Test Coordinator, and first author. She led the development or revision for half of SEPUP's middle school course, Issues and Physical Science, Second Edition, and developed several high school units as part of the Science and Global Issues project. Most recently, Janet was the Project Coordinator and a lead author for the redesign of SEPUP's three-year Issues and Science middle school sequence that incorporated the Next Generation Science Standards (NGSS). Before joining SEPUP, Janet served for

seven years as a high school physics teacher and as a Dean of Students in public and private schools in Massachusetts, New York, and California. She has a bachelor's degree in Mechanical Engineering from the University of Rochester, a Master's Degree in Science Education from the University of Massachusetts- Amherst, and completed graduate study in Education of the Deaf at Gallaudet University.

**Students: Describe the type(s) of students for which this submission is intended.**

Issues and Science Life is designed for students in grades 6-8. It employs instructional strategies, supports, and a multimodal approach that cater to diverse student abilities. The program offers differentiation strategies at both the activity level and overall, specifically targeting academically struggling students, English language learners, and academically gifted students. Issues and Science Life can be used in a wide range of middle school classrooms with diverse students in the same class.

**1. LIST THE FLORIDA DISTRICTS IN WHICH THIS PROGRAM HAS BEEN PILOTED IN THE LAST EIGHTEEN MONTHS.**

None

**2. HOW ARE YOUR DIGITAL MATERIALS SEARCHABLE BY FLORIDA STATE STANDARDS (SECTION 1006.33(1)(E), FLORIDA STATUTES)?**

Program content is digitally searchable by Florida State Standards through our online curriculum portal.

**3. IDENTIFY AND DESCRIBE THE COMPONENTS OF THE MAJOR TOOL.** The Major Tool is comprised of the items necessary to meet the standards and requirements of the category for which it is designed and submitted. As part of this section, include a description of the educational approach of the submission.

Issues and Science Life is based on an instructional model that integrates three-dimensional learning with a thematic approach to applying science and engineering in the context of issues. These issues are compelling personal, local, societal, and global topics or problems for students to debate, discuss, or explore to develop a solution. By presenting issues related to scientific content, students are empowered to voice their own ideas. Importantly, issues deepen students' comprehension of how scientific principles and evidence contribute to informed decisions at personal and societal levels.

In Issues and Science Life, students explore cells from molecules to organisms; ecosystems; heredity; and biological evolution. The 6 units are flexible in order based on local priorities. Students begin their investigation of life science at the ecosystem level, as they focus on invasive species and possible solutions for controlling them. Body Systems shifts the focus to the biology of organisms, primarily humans. This approach engages students with concrete phenomena related to organism structure and function at the scale of body systems and organs. From Cells to Organisms builds on what students

learned about the hierarchical organization of organisms by expanding their exploration to the microscopic scale—the structure and functions of cells and tissues within organs. Reproduction dives in to the level of genes within cells and the cause-and effect relationships between genes, the environment, and the traits of organisms. In Evolution, students cycle back to phenomena on a larger scale, as they explore how the diversity of organisms in ecosystems evolved through the process of natural selection. This unit builds on students’ understanding of genetics and organisms’ interactions with the environment from earlier units. Biomedical Engineering provides an opportunity for students to focus more deeply on engineering concepts and practices, as well as the scientific concepts related to the structure and function of organisms, as they undertake a variety of engineering challenges—including designing a prototype for an artificial hand.

Students continually engage in labs and investigations in heterogeneous groups that require them to collect evidence to make sense of ideas. The structure of activities has students “doing” first so they develop their own understandings of phenomena and then read about it to make connections and expand their understanding. Evidence from the activities is required when answering analysis questions to help support or refute claims. There are 11 types of activities that students will engage in throughout Issues and Science Life: Talking it Over, Investigations, Laboratories, Readings, Role Plays, Modeling, Projects, View and Reflects, Computer simulations, Problem Solving, and Field Studies. Students gather evidence from multiple sources and investigations as they build an increasingly sophisticated explanation for how or why something happens in the natural world. Students have opportunities to share and update their views as new evidence is gathered. Throughout each unit, multiple instructional strategies are suggested to support teachers in anticipating student misconceptions and background knowledge. These strategies support student literacy with reading, writing, and group discussion.

Please visit <https://www.lab-aids.com/florida> for more information.

Major Tool - Student Components: Describe each of the components, including a format description.

Student Book - There are 6 hardcopy Student Books in Issues and Science Life, one for each unit. The Student Books are also available digitally on the Lab-Aids Student Portal. Each book ends with a glossary and multiple student appendices including graphing supports, student group conversation starters, and skills practice like handling microscopes and reading graduated cylinders.

Lab-Aids Student Portal - An online platform (device agnostic) where students can access the complete student books in English and Spanish, student sheets, and videos/simulation links embedded into the text. The Lab-Aids portal will sync with a variety of LMS including Canvas, Clever, Schoology, Google Classroom, and more.

Complete Materials Packages (kits)- Lab-Aids programs include high-quality equipment for each activity. This includes innovative lab-ware to be used throughout the year, specific solutions and materials for unique labs, as well as items needed for card sorts, modeling, role-plays, and projects. Materials needed to complete all hands-on activities in the program are provided in kits for each unit. Each kit supports 5 classes of 32 students or 160 students total and on average are at least 70% non-consumable. The kits come in custom molded drawers where each component has its own space for optimal organization.

Certificates for live specimens are included where appropriate. Durable metal storage carts on wheels provide a space for the drawers to be kept safe and protected for years of use.

Major Tool – Teacher Components: Describe each of the components, including a format description.

Teacher's Edition - There are 6 3-ring binder Teacher's Editions in Issues and Science Life, one for each unit. The Teacher's Edition is also available digitally on the Lab-Aids Teacher Portal. The Teacher's Edition guides you through each activity in the Student Book and helps you see the development of concepts within the big picture of the unit. It helps you set up the equipment from the kit, organize the classroom, conduct activities, and manage practical details, all of which enhance students' learning environment. The Teacher Edition text is broken down into several sections, such as Activity Overview, Materials and Advanced Prep, Teaching Summary, and Background information to name a few. The Teacher Edition is packaged as a color-printed, loose-leaf binder which allows you to personalize it with highlighting, annotations, rearrangements, and insertions. It provides full support for teaching the program. The printed Teacher's Edition also includes copies of all student sheets and visual aids.

Teacher Resources - There is 1 3-ring binder Teacher Resources as part of Issues and Science Life. The Teacher Resources is also available digitally on the Lab-Aids Teacher Portal. The Teacher Resource (TR) provides background and suggestions to increase the overall effectiveness of implementing the program across all levels of learners. Some sections include: SEPUP's Approach to Teaching and Learning, Differentiation Strategies for Diverse Learners, Literacy Strategies for Supporting Reading Comprehension and for Enhancing Students' Writing, and comprehensive instruction on the SEPUP Assessment System. There is also a section containing unit specific resources, such as overviews, unit storyline and phenomena table, assessment blueprints, and item banks.

Lab-Aids Teacher Portal - An online platform (device agnostic) where teachers can access online copies of Student Books (in English and Spanish), Teacher's Editions, Teacher Resources, and more. The Lab-Aids Teacher Portal also includes editable PowerPoint and Google Slide files for every activity. Printable copies of student sheets and visual aids are available as well. Videos of all hands-on activities and digital simulations are included in addition to a digital and editable version of the assessment item bank for each unit.

**4. IDENTIFY AND DESCRIBE THE ANCILLARY MATERIALS.** Briefly describe the ancillary materials and their relationship to the major tool.

Ancillary Materials – Student Components: Describe each of the components, including a format description.

Lab-Aids Science Notebook - The Lab-Aids Science Lab Notebook was designed with best practices in mind. Each of the 160 pages has a 2-column design with GraphAnywhere, which allows data tables and graphs to be drawn in a fraction of the usual time, and plenty of room to record data, notes, and

responses to questions. It is also three-hole punched to allow students to store the entire notebook, or individual completed pages, in their binder.

Ancillary Materials – Teacher Components: Describe each of the components, including a format description.

N/A

## **5. IDENTIFY WHICH INDUSTRY STANDARD PROTOCOLS ARE UTILIZED FOR INTEROPERABILITY?**

The Lab-Aids Portal is LTI v1.0, LTI v1.3, OneRoster API v1.1, and QTI compliant.

**6. HOW MUCH INSTRUCTIONAL TIME IS NEEDED FOR THE SUCCESSFUL IMPLEMENTATION OF THIS PROGRAM?** Identify and explain the suggested instructional time for this submission. If a series, state the suggested time for each level. The goal is to determine whether the amount of content is suitable to the length of the course for which it is submitted.

Issues and Science Life takes approximately 37 weeks of instruction to complete, based on daily 50-minute class periods.

**7. WHAT PROFESSIONAL DEVELOPMENT IS AVAILABLE?** Describe the ongoing learning opportunities available to teachers and other education personnel that will be delivered through their schools and districts as well as the training/in-service available directly from the publisher for successful implementation of the program. Also provide details of the type of training/in-service available and how it may be obtained. (The information provided here will be used in the instructional materials catalog in the case of adoption of the program.)

Once Issues and Science Life is purchased, the Lab-Aids Implementation Team will reach out to district contacts to coordinate various aspects of getting the program started, including the scheduling of professional learning. The Implementation Team can be contacted at any point to schedule training. Training can be provided on all Issues and Science Life units and is available on-site or online. Although most districts prefer to schedule this first-time training during the summer, it can be scheduled at any time during the year. We recommend 3-4 days of PL per grade level, with content delivered in summer and in-year workshops. The intention of our Implementation Training is to familiarize teachers with their new materials, but also to spend time on the why behind the incorporated pedagogical approaches - why is this an effective way to teach science?

Years one and two can be strategically customized with a district to best meet teachers where they are now and help guide them to where they want to be. By year three we would transition to support for

district leadership around the instructional materials, including participation in our annual Summer Academy and Train the Trainer events.

Our professional learning is based around modeling best practices and instructional components of Issues and Science Life. Although we work from our own professional learning templates, we are happy to modify the general approach and content based on input from client districts. All our certified trainers are classroom teachers or former classroom teachers who have taught this material and are experienced and effective presenters.

The following content is provided in all workshops:

- Course Design

Issues and Science Life uses environmental and societal issues to provide a context for learning science by connecting science concepts to students' everyday lives. This is matched to an inquiry-based approach, since we believe science is an active process. Teachers will learn to use the four important elements of a SEPUP program: Student Book (SB), Teacher Edition (TE), materials kit, and digital tools/website support.

- Florida's State Academic Standards for Science

This workshop content explores support in Issues and Science Life for the Florida's State Academic Standards for Science, including unpacking/understanding the standards, and alignment of the program to the Performance Expectations, including support for the Science and Engineering Practices, Disciplinary Core Ideas, Crosscutting Concepts, and Nature of Science. Additionally, support for teaching using phenomena, storylines, and driving questions will be highlighted.

- Support for Literacy, Inquiry, and Differentiated Instruction

Issues and Science's course design uses issues to connect and motivate all students and is based on a learning cycle model that supports the 5E approach. There are 11 distinct activity types to support inquiry teaching and learning, for example, Investigations, Laboratories, Modeling, Problem Solving, Computer Simulations, and several more. Support for reading, writing, and oral presentation, and working with diverse learners, including GAT, EL, and students with special needs, is provided in introductory and follow up workshops.

- Classroom Management

Included are day-to-day topics such as getting started with Issues and Science, using the equipment kit, management of student laboratory activities, lab safety, monitoring group work, using technology, and using post-activity discussions to make connections to science content.

- Assessment

Using the Issues and Science Life formative assessment system, all students will complete tasks, producing student work that can be scored using rubrics developed for each of the Science and Engineering Practices, including Planning and Carrying Out Investigations, Analyzing and Interpreting Data, Arguing from Evidence, Communicating Concepts and Ideas, and more. The assessment opportunities are distributed over time, allowing teachers to monitor student progress, and an item bank is used as a summative check for student understanding. Teachers will examine support for

assessment and will discuss and moderate samples of actual student work. Approaches that feature digital solutions for delivery AND assessment will be prominently featured.

- Instructional Technology

Issues and Science Life supports its materials with external web content, simulations, PowerPoints/Google Slides, and more as well as assessment tools. Initial-use and follow up workshops can include content to support effective student use of tablet or laptop devices if desired. The use of the technology can be modeled with selected lessons. Our digital portals, available on any device with an internet browser, organize all digital resources, including Student Book and Teacher Edition, PowerPoints/Google Slides, Remote Learning Activities, Literacy Supports, and Assessment Tools all in one place.

Additionally, all first-year teachers are invited to attend a monthly series of webinars targeted at areas including classroom management, using the online platform, assessment, and more. These hour-long sessions feature 15 minutes of instruction from a Lab-Aids trainer and then 45 minutes of Q&A for additional support around the webinar topic and beyond. These webinars are free to participate in.

Select activities from units also have on demand video professional learning available. These videos dive deep into activity itself as well as the unit storyline and how the specific activity ties into the overall unit.

**8. WHAT HARDWARE/EQUIPMENT IS REQUIRED?** List and describe the hardware/equipment needed to implement the submission in the classroom. REMEMBER: Florida law does not allow hardware/equipment to be included on the bid! However, schools and districts must be made aware of the hardware/equipment needed to fully implement this program.

The Lab-Aids Portal is device agnostic. Students and teachers can access their Lab-Aids Portal account via a modern internet browser running Windows, Mac OSX, Chrome, iOS, or Android. A Windows and iOS app are available to access the online curriculum, but they are not required. Below are the 3 ways that students and teachers can access their online curriculum, along with the minimum and recommended hardware and software requirements.

You can access the Lab-Aids Portal using the latest versions of Chrome, Safari, Firefox, and Edge. At the moment, we do not fully support the users accessing the Lab-Aids Portal from a browser on a smartphone due to the limited screen size/resolution. For smartphone users, we recommend utilizing a dedicated Lab-Aids Portal app if available. We no longer support Internet Explorer as of November 2022.



	Edge*	Firefox*	Chrome*	Safari*
Windows 7+				
	✓	✓	✓	
macOS 10.11+		✓	✓	✓
iOS 11+ (iPad only)				✓
Android 8+ (tablet only)			✓	
ChromeOS			✓	

\*It is strongly recommended that the latest (most up to date) browser version be used due to compatibility and security concerns.

#### Minimum Hardware/Software Requirement

Minimum			Recommended	
Platform	Hardware	OS	Hardware	OS
iPad	iPad 2	iOS 10	iPad 4	iOS 12
iPhone	iPhone 5	iOS 10	iPhone 7	iOS 12
Android Tablet	Nexus 7	Android 5.0	Nexus 9	Android 9.0

Android Phone Samsung Note 3

Android 5.0

Google Nexus 6P

Android 9.0

The most up-to-date software and hardware requirements can be found here for additional devices:  
<https://www.lab-aids.com/min-requirements>

**9. WHAT LICENSING POLICIES AND/OR AGREEMENTS APPLY?** If software is being submitted, please attach a copy of the company's licensing policies and/or agreements.

Please see our attached Terms and Agreements.

**10. WHAT STATES HAVE ADOPTED THE SUBMISSION?** List some of the states in which this submission is currently adopted.

The version of Issues and Science Life developed for Florida is not in use in states outside of Florida. Issues and Science is a national program used in classrooms across the country, with large district adoptions in multiple states and U.S. territories.

**11. WHAT OPEN EDUCATIONAL RESOURCES RELATED TO THIS BID DO YOU MAKE AVAILABLE(S)?** List and describe each of the components, including a format description. (Open Educational Resources (OER) are high-quality, openly licensed, online educational materials that offer an extraordinary opportunity for people everywhere to share, use, and reuse knowledge.)

N/A

**12. ALTHOUGH NOT CALLED FOR IN THE STATE ADOPTION, DO YOU HAVE ADVANCED PLACEMENT (AP) OR ACCELERATED PROGRAM INSTRUCTIONAL MATERIALS AVAILABLE FOR THE COURSE(S) BID FOR ADOPTION?**

Yes, Issues and Science was developed with flexible units that can be used for an ACCELERATED PROGRAM of instruction.

**13. WHAT, IF ANY, FOREIGN LANGUAGE TRANSLATIONS DO YOU HAVE AVAILABLE?**

Issues and Science Life has been translated into Spanish. The student book, item bank, student sheets, and scoring guide rubrics are all available in Spanish as part of the digital platform. In addition to this, the Read Speaker function on the Lab-Aids portal will also read Issues and Science Earth aloud to

students in 28 languages. These languages include Arabic, German, Latvian, Spanish, Chinese (Mandarin), Greek, Norwegian, Swedish, Danish, Hungarian, Polish, Thai, Dutch, Indonesian, Portuguese (Brazil), Portuguese (Portugal), Turkish, Italian, Japanese, Romanian, Vietnamese, French, Korean, and Russian.

**14. DO YOU PROVIDE ACCESS POINT SCAFFOLDING OR AN ACCESS POINT CORRELATION UPON REQUEST?**

Yes, we provide access point correlation upon request.

**15. ESSA LEVELS OF EVIDENCE:** To be considered an evidence-based program (or practice), it is required to have evidence to show that the program is in fact effective at producing results and improving outcomes in reading when implemented. Identification of evidence level alignment, Levels 1-4 (as outlined in the specifications), for the entirety of the program, part of the program, or individual practices within the program is required. Please explain how your product meets these requirements.

The Science Education for Public Understanding Program (SEPUP) is a research-based curriculum development program at the UC Berkeley Lawrence Hall of Science. SEPUP's curriculum materials are well aligned to ESSA's Tier 4 criteria across the program. SEPUP's approach to science education is guided by a well-defined logic model, which includes several key components.

**Inputs:** SEPUP curriculum includes a comprehensive set of resources and materials required for successful implementation, including teacher guides, student materials, hands-on kits, and professional development for educators.

**Activities:** SEPUP's comprehensive curriculum materials engage students in a variety of activities, including hands-on investigations, readings, discussions, and assessments. These activities are designed to promote inquiry-based learning, scientific literacy, and the development of critical thinking skills.

**Outputs:** Through engagement in SEPUP activities, students become active participants in their learning, making sense of complex science ideas, and building agency and ownership of science learning.

**Outcomes:** SEPUP aims to achieve long-term outcomes that include increased scientific literacy among students, improved performance in science assessments, and the development of an enduring interest in science and STEM-related careers.

**Impact:** The ultimate impact of SEPUP's logic model is to contribute to the overall improvement of science education and scientific literacy nationwide. By providing high-quality curriculum materials and professional development support to teachers, SEPUP seeks to elevate science instruction, empower students, and foster a scientifically literate society.

Through its logic model, SEPUP establishes a clear pathway from inputs to impact, guiding its efforts in advancing science education and promoting the understanding and appreciation of science among students.

With respect to improving outcomes for reading, SEPUP's literacy strategies are firmly rooted in best practices informed by current education research, ensuring an effective and engaging learning experience for students. By integrating literacy skills into science education, SEPUP recognizes the interconnectedness of these disciplines. SEPUP's strategies prioritize active reading, writing, and critical thinking, encouraging students to analyze scientific texts, communicate their ideas clearly, and make evidence-based arguments. The use of graphic organizers, interactive discussions, and hands-on activities not only deepens students' comprehension but also fosters collaborative learning and the development of scientific literacy.

While SEPUP primarily focuses on science education, its implementation has been found to have positive effects on reading abilities as well. Here are a few key elements of SEPUP's approach to literacy, all of which are based on research-based best practices:

**Integration of literacy skills:** SEPUP incorporates literacy skills into science instruction. The program emphasizes reading comprehension, vocabulary development, and writing skills within the context of scientific content. By engaging students in reading and writing about science topics, SEPUP helps them improve their overall literacy skills, which can positively impact reading scores.

**Content-rich materials:** SEPUP provides curriculum materials that are designed to be content-rich and promote reading engagement. The program includes readings and other resources that expose students to various types of texts, such as scientific articles, case studies, and informational texts. Regular exposure to such materials can enhance students' reading comprehension and analytical skills.

**Support for struggling readers:** SEPUP recognizes the diverse needs of students, including struggling readers. The program incorporates instructional strategies and scaffolding techniques to support students who may face challenges with reading. These strategies may include graphic organizers, guided reading activities, and cooperative learning structures, which can assist struggling readers in improving their reading abilities.

**Alignment with literacy standards:** SEPUP aligns its curriculum with literacy standards. This alignment ensures that the program addresses the specific reading skills and strategies required for academic success, providing students with opportunities to develop and practice these skills.

It is important to note that while there is evidence supporting the positive impact of SEPUP on reading scores, the extent of improvement may vary depending on various factors, including implementation fidelity, teacher expertise, and student characteristics. Schools and districts considering the adoption of SEPUP should review specific research studies, consult with educators who have implemented the program, and evaluate their own needs and goals to make an informed decision.

SEPUP and Lab-Aids are currently developing opportunities for districts that are interested in adopting SEPUP to be part of an efficacy study. By participating in an efficacy study, districts can collaborate with SEPUP to assess the effectiveness of the program and gather valuable data on its impact on student learning outcomes. This involvement allows districts to contribute to the broader knowledge base on science education best practices and evidence-based instructional strategies. Additionally, districts can

benefit from the insights gained through the study, gaining a deeper understanding of how SEPUP can enhance their science curriculum and instructional practices.