LAB-AIDS®
Proven Science Programs

EVIDENCE FOR NEXTGEN TIME AND SEPUP PROGRAMS

The following information is designed to help teachers using the NextGen TIME review tools to find evidence in our SEPUP programs from the five core rubrics used in the NextGen TIME process. It is not intended to be an exhaustive list but to help you more quickly find examples of evidence in our student books, teacher editions, and teacher resources.

SEPUP
Materials from the Science Education for Public Understanding Program (SEPUP) are developed at the Lawrence Hall of Science, at the University of California, Berkeley, and distributed nationally by LAB- AIDS, Inc. Since 1987, development of SEPUP materials has been supported by grants from the National Science Foundation and other public and private sources. SEPUP programs include student books, equipment kits, teacher materials, and online digital content, and are available as full year courses, or separately, as units, each taking 3-8 weeks to complete, as listed below.

Middle Level, Grades 6-8 ; suggested discipline-specific scope and sequence

Earth Science	**Life Science**	**Physical Science**
Earth's Resources	Biomedical Engineering	Chemistry of Materials
Geological Processes	Body Systems	Chemical Reactions
Land, Water, and Human Interactions	Ecology	Energy
Solar System and Beyond	From Cells to Organisms	Force and Motion
Weather and Climate	Evolution	Fields and Interactions
	Reproduction	Waves

NextGen TIME Components and Indicators	Where found in SEPUP program:	
	Student Book	**Teacher Edition/Resources**
F1. Presence of Phenomena/Problem	• Phenomena Table on the back of the Table of Contents (TOC) • Unit opening vignette	*Located within an activity* • NGSS Connections • Investigative Phenomena and Sensemaking *Located in the front/back of the Teacher Edition* • Phenomena, Driving Questions, and SEPUP Storyline tables • NGSS Overview tables • Driving Question Board cards
F2. Presence of Three Dimensions	• Analysis question icons, identified by the three dot designs that signal PE assessments • Type of activity found under title (Design, Modeling, Talk it Over, Laboratory, etc)	*Located within an activity* • NGSS Correlations • Build Understanding • Analysis item colored icons **Online Resources**: • Learning Pathways for each Performance Expectation, seen at sepuplhs.org/pathways
F3. Presence of Logical Sequence	• Phenomena Table on the back of the TOC	*Located in the back of the Teacher Edition* • Phenomena, Driving Questions, and SEPUP Storyline tables • NGSS Overview tables **Online Resources**: • Learning Pathways for each Performance Expectation, seen at sepuplhs.org/pathways

NextGen TIME Components and Indicators	Where found in SEPUP program:	
ST1. Phenomena/Problems	• Phenomena Table on the back of the Table of Contents (TOC) • Unit opening vignette introduces the issue or problem and associated phenomena	*Located within an activity* • Investigative Phenomena and Sensemaking *Located in the back of the Teacher Edition* • Phenomena, Driving Questions, and SEPUP Storyline tables
ST2. Three-Dimensional Conceptual Framework	• Analysis items include SEPs, CCCs, and DCIs to help students make connections throughout the unit • Group discussions within Procedure assist in linking prior knowledge to negotiated new understandings	*Located within an activity* • Get Started discussion questions • Build Understanding discussion questions • Analysis items *Located in the front/back of the Teacher Edition* • Driving Question Board cards
ST3. Prior Knowledge	• Anticipation Guide • Driving Question Board review • Introduction to each activity • Analysis items	*Located within an activity* • Get Started discussion questions • Build Understanding discussion questions • Analysis items *Located in the front/back of the Teacher Edition* • NGSS Overview tables • Unit Overview tables
ST4. Metacognition Abilities	• Along with the Student Book, students daily record in a Science Notebook their thoughts, wonders, questions, analyses, and scientific data. • Revisit the Guiding Question • View and Reflect activities • Analysis items with colored icons to help students think about how the three-dimensions are being connected in their analyses	*Located within an activity* • Analysis items with colored icons • Discussion Web strategy • Anticipation Guide *Located in the front/back of the Teacher Edition* • Driving Question board cards • KWL charts used throughout units • Opportunities for Eliciting and Addressing Students' Ideas • Literacy and Sensemaking Support Sheets
ST5. Equitable Learning Opportunities	• The unit opening vignette explains the societal or personal issue that SEPUP uses to engage the students in authentic and relevant experiences. Teaching science through the lens of a	*Located within an activity* • Strategies for Teaching Diverse Learners *Located in the front/back of the Teacher Edition*

NextGen TIME Components and Indicators	Where found in SEPUP program:	
	socio-economic issue allows for an equitable experience for students. • Instructional strategies used for each activity (Design, Talk it Over, Laboratory, etc) allow students to interact with scientific DCIs, SEPs, and CCCs through various lessons. • Science as a Human Endeavor found in Appendix A	• Literacy and Sensemaking Support Sheets **Teacher Resources:** • Equity: Science for All, strategies for reducing bias and increasing accessibility **Online Resources:** • Science as a Human Endeavor links, seen at sepuplhs.org/human_endeavor

NextGen TIME Components and Indicators	Where found in SEPUP program:	
SP1. Three-Dimensional Performances	• Analysis items with colored icons • Performance Expectation assessments within specific activities	*Located within an activity* • NGSS Connections explains when an activity assesses a specific Performance Expectation. • NGSS Correlations makes visible the Performance Expectation that each activity is: working towards, assessing, or applying. This section also shows the DCIs, SEPs, and CCCs that are implemented into the activity. • Analysis items with colored icons • SEPUP Scoring Guides are used to formatively and summatively assess student thinking throughout the unit and are aligned to the SEPs. *Located in the front/back of the Teacher Edition* • Assessment Blueprint tables • NGSS Overview tables
SP2. Variety of Measures	• Different activity types use different rubrics to assess different types of student thinking and performance	*Located within an activity* • Assessment Quick Checks to formatively assess students' understanding • Performance Expectation summative assessments scored with embedded scoring guides aligned to the Science and Engineering Practices *Located in the front/back of the Teacher Edition* • Unit item banks • Assessment Blueprint tables show all formal assessment opportunities for the unit
SP3. Student Progress Over Time	• Different activity types use different rubrics to assess different types of student thinking and performance	*Located in the front/back of the Teacher Edition* • The Assessment Blueprints allow teachers to chart the performance of students over time. • The Driving Question Board helps teachers chart students'

NextGen TIME Components and Indicators	Where found in SEPUP program:	
		conceptual understanding as they revisit their original questions to see how they have learned.
SP4. Equitable Access	• Formative and summative assessment opportunities are free from bias, including gender, racial, socioeconomic status and cultural. • Science as a Human Endeavor found in Appendix A	*Located within an activity* • Writing Frames create an outline to guide student composition, helping those students who need the assistance to develop and organize their ideas prior to writing extended responses. **Teacher Resources:** • Equity: Science for All, strategies for reducing bias and increasing accessibility **Online Resources:** • Science as a Human Endeavor web resources help students learn about the contributions of diverse scientists and engineers, seen at sepuplhs.org/human_endeavor

NextGen TIME Components and Indicators	Where found in SEPUP program:
TS1. Phenomenon-/Problem-Driven Three-Dimensional Learning	*Located within an activity* • NGSS Connections • NGSS Correlations • Investigative Phenomena and Sensemaking • Get Started of Activity 1 *Located in the front/back of the Teacher Edition* • NGSS Overview tables • Phenomena, Driving Question, and SEPUP Storyline tables **Teacher Resources:** • SEPUP Unit Design **Online Resources:** • Learning Pathways for each Performance Expectation, seen at sepuplhs.org/pathways
TS2. Coherence	*Located within an activity* • NGSS Connections • NGSS Correlations • Investigative Phenomena and Sensemaking *Located in the front/back of the Teacher Edition* • See instructional sequences in the *Phenomena, Driving Questions, and SEPUP Storyline* document that show how students work through investigative phenomena to ultimately help explain the anchoring phenomenon or offer a solution to the unit issue. **Online Resources:** • Learning Pathways for each Performance Expectation (Connections to CCC, Common Core ELA, Math), seen at sepuplhs.org/pathways
TS3. Effective Teaching	*Located within an activity* • NGSS Connections • Investigative Phenomena and Sensemaking • Get Started, Do the Activity, and Build Understanding: Detailed suggestions for teaching the lesson, from lesson openers to processing the lesson, and end of lesson discussion **Online Resources:** • PowerPoints • LABsent videos and documents
TS4. Support for Students with Diverse Learning Needs	*Located within an activity* • Strategies for Diverse Learners includes strategies for students with learning disabilities, English language learners, and academically gifted students

NextGen TIME Components and Indicators	Where found in SEPUP program:
	Online Resources: • Online access to the Student Book with notetaking and highlighting features • Downloadable PDF version of the Student Book for read aloud capabilities • Digital simulations • Spanish translations of Student Books, student sheets, visual aids, sample student responses, item banks, and scoring guides • LABsent videos and files that allow students who miss class, or need additional review, to see the experiment, record the data, and complete the activity
TS5. Support to Monitor Student Progress	*Located within an activity* • Quick Checks are embedded, formative assessment tasks that can be used as checkpoints of students' learning along one, two, or three dimensions *Located in the front/back of the Teacher Edition* • Assessment Blueprint tables • Item Banks provide one-, two-, and three-dimensional questions in the form of multiple-choice, short-answer, and longer-form questions • Literacy and Sensemaking Support Sheets **Teacher Resources:** • Assessment section explains the complete SEPUP Assessment System • SEPUP Scoring Guides

NextGen TIME Components and Indicators	Where found in SEPUP program:
Progressions of Learning	*Located within an activity* • NGSS Connections • NGSS Correlations • SEPUP scoring guides allow teachers to vertically align assessments throughout the grade-level band. This allows teachers to naturally increase grade-level-appropriate complexity over the course of the program. *Located in the front/back of the Teacher Edition* • Assessment Blueprint tables **Teacher Resources:** • Assessment section explains the complete SEPUP Assessment System; see in particular Scoring Guide, Assessment Blueprint tables, Exemplars, Item Banks, Quick Checks **Online Resources:** • Learning Pathways for each Performance Expectation, seen at sepuplhs.org/pathways
Unit-to-Unit Coherence	**Teacher Resources:** • Recommended Unit Sequences, Suggested Three-Year Integrated Sequence and Suggested Discipline-Specific Sequences with rationale
Program Assessment System	*Located within an activity* • SEPUP Scoring Guides are used to formatively and summatively assess student thinking throughout the unit and are aligned to the Science and Engineering Practices. • Assessment of each Performance Expectation is noted within each unit as a formal, summative assessment. *Located in the front/back of the Teacher Edition* • Assessment Blueprint tables • SEPUP Scoring Guides aligned to the Practices **Teacher Resources:** • SEPUP Assessment System; see Components of the SEPUP Assessment System, Assessment Variables, Scoring Guides, Assessment Blueprint tables, Exemplars, Item Banks, Quick Checks **Online Resources:** • Learning Pathways (available at sepuplhs.org/pathways) provide a visual map of the SEP, DCI, and CCC elements as found over multiple SEPUP lessons that lead to mastery of the associated PE.