

# Strengthening Science Education and Environmental Literacy in California's New Era Of Local Control: The Toolkit

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## **Strengthening Science Education and Environmental Literacy Through Local Control: A Toolkit to Help Develop Your District's Local Control Accountability Plan (LCAP)**

This toolkit has been assembled with leadership from Lawrence Hall of Science at the University of California, Berkeley, to help parents, students, educators, community partners and business leaders who are concerned about improving science education and environmental literacy through more robust history-social science education to participate in their local school district budget development process. As explained in our *LCAP Primer*, in 2013 changes in California law gave school districts more control and flexibility over how to spend state education funds, while also requiring new levels of transparency and accountability through the creation of Local Control and Accountability Plans (LCAPs). This toolkit helps science education, environmental literacy, and history-social science advocates understand how the LCAP development process works and how to participate in it. More importantly, it guides stakeholders to identify specific recommendations for strengthening science education, environmental literacy, and history-social science within their district and translating those recommendations into the format of an LCAP.

High-quality science education and environmental literacy encompasses rigorous instruction in the individual disciplines of science, mathematics, history-social science, and english language arts, and as well as integrated approaches that weave two or more of these subjects together – like they are in the real-world (e.g., in the practice of science and engineering). The development of environmental literacy in students also requires high-quality history-social science education, which involves rigorous introduction to the inquiry model of historical investigation that is rooted in content and disciplinary understanding, as well as literacy. California's commitment to implement new standards for math, english language arts, science, and history-social science – the Next Generation Science Standards (NGSS), the Common Core State Standards for Math (CCSS-M), the Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects (CCSS-ELA), California English Language Development (ELD) Standards, and California's newly adopted History-Social Science (HSS) Framework – provides the biggest opportunity in decades to bring high-quality science education, and develop environmental literacy, for all students.

Because there are more existing resources focused on implementation of the Common Core State Standards, , this toolkit focuses largely on science education, implementation of the NGSS, and a focus on environmental literacy within both science and history-social science education (that which State Superintendent of Public Instruction, Tom Torlakson, called for with his 2015 Blueprint for Environmental Literacy). This toolkit also aims to highlight new content and opportunities within the NGSS to strengthen science education and history–social science education through instruction in environmental literacy as well as linkages to informal education.



The toolkit contains seven components:

1. **LCAP Primer** explains the LCAP development process and ways stakeholders can provide input working with district and community leaders in support of science education and environmental literacy in both science and history-social science education.
2. **Talking Points and FAQs** guide stakeholders in making the case for science education and environmental literacy, including responding to common questions and objections, highlighting key features of the Next Generation Science Standards, discussing the integration of science and engineering with the Common Core State Standards, and supporting environmental literacy within high-quality history-social science education.
- 3-6. **Guiding Questions for Developing a Science- and Environmental Literacy- supportive LCAP** to assist advocates in assessing major strengths and gaps in supporting science education and environmental literacy in their communities and identifying priority needs for LCAP development. Focused on implementation and improvement of a district science program and supporting environmental literacy across science and history social science, this tool has four parts—a set of broad-based questions for use by community stakeholders (parts 3-4), and a set of more in-depth questions to support planning by within-district science and other content area leadership teams (parts 5-6).
- 7-8. **Model LCAP Content for Science and Environmental Literacy** offers science- and environmental literacy-focused LCAP goals, measurable outcomes and examples of actions/services to support effective implementation of NGSS and the HSS Framework. This component also offers a separate section dedicated to connecting science and history-social science with environmental literacy.
9. **Resources List** provides links to resources on LCAP development, the NGSS, environmental literacy, HSS Framework, curriculum, instructional materials, professional learning supports and other information of use in supporting science education and environmental literacy in science and history-social science education.

We welcome input and questions from the field to improve and expand upon this toolkit. Please send your requests, comments and examples of strong LCAP planning for science education and environmental literacy to <https://www.surveymonkey.com/s/lcapsciencefeedback>.

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### **About Us**

The Lawrence Hall of Science at the University of California, Berkeley helps districts, schools, afterschool programs, science centers, educators, parents, and youth realize the potential of the Next Generation Science Standards (NGSS) and their convergence with the Common Core State Standards. The Hall influenced the direction of NGSS, and our staff, programs, research studies, and curriculum materials were used to guide the development of these forward-thinking standards. For almost 50 years the Lawrence Hall of Science has led, developed, and supported high-quality learning experiences in the San Francisco Bay Area, nationally, and internationally. Our mission is squarely focused on activating science learning and STEM literacy for all. For more information, visit [www.lawrencehallofscience.org](http://www.lawrencehallofscience.org).