



Developed at:



THE LAWRENCE
HALL OF SCIENCE™
UNIVERSITY OF CALIFORNIA, BERKELEY

**Engage teachers
and they'll engage
students.**

FOSS professional learning experiences help teachers become active learners.

FOSS puts the experience of over 100,000 teachers to work in your classroom, making it easy to engage your students in active learning. Our professional learning is designed to transform the culture of classrooms, encouraging students to explore and educators to collaborate. We strive to develop long-term partnerships with districts and teachers nationwide by providing a range of customized services.

Planning

We can help you to set clear goals and benchmarks, and to meet the specific needs of your teachers by building multi-year customized plans that align with NGSS, Common Core, and English Language Proficiency standards.

Implementation

Face-to-face workshops introduce the FOSS materials, teaching and assessment resources, instructional design, and specific teaching strategies so teachers understand the program and how to manage materials and students. Classroom coaching and mentoring help teachers promote student learning and initiate the use of formative assessment.

Support

Ongoing support, leadership development, peer collaboration, and networking opportunities maintain the fidelity of your implementation and support further staff growth.

Materials management made easy

During professional learning, teachers and administrators learn strategies that make setting up the classroom science environment easy and efficient, and are introduced to many time-saving resources on FOSSweb for classroom management.

FOSS professional learning is transformative and customizable.

FOSS professional learning programs are designed to transform the culture of classrooms and to foster continuous improvement and collaboration among educators. We work with districts to offer customizable, multi-year professional development plans that include a range of:

- **Hands-on workshops** that allow teachers to learn by doing. These workshops leave educators excited about working with FOSS materials and convey a clear understanding of teaching resources and specific teaching strategies.
- **Classroom coaching and mentoring** to help teachers develop strong pedagogical techniques that support student learning and initiate the use of formative assessment as an instructional practice.
- **Facilitation of professional learning groups** to help teachers analyze data and make informed instructional decisions.
- **Summer institutes and national workshops** that provide opportunities to network with other teachers and share ideas directly with the FOSS development staff.

“FOSS really walks you through every step of the process. From getting your materials together, how to set up your groups, and even what to say in the beginning, what background knowledge you need to have. You don’t need to be an expert to use the FOSS kits. You just need to be a teacher.”

Clare O., Teacher
Rhode Island

FOSS supports active learning.

Our goal is to help educators in the classroom successfully and easily implement the most innovative pedagogies using the FOSS program. FOSS professional learning supports teachers in a multitude of ways, including:

Focusing on NGSS standards

The vision of NGSS quickly comes to life when teachers experience FOSS investigations, as their students figure out and explain phenomena using effective three-dimensional teaching and learning strategies.

Using innovative assessment to improve student learning

Professional learning can help educators use a variety of tools in each module to assess how students engage with the three dimensions envisioned in the NGSS performance expectations. FOSS has designated multiple opportunities in each module to assess all three dimensions: development of disciplinary core ideas, use of science and engineering practices, and the application of crosscutting concepts to explain a variety of phenomena.

Meeting ELA and Math Common Core standards while teaching science

Teachers learn to capitalize on the synergy with the Common Core State Standards for English Language Arts (ELA) and Math by using the connections built into each FOSS investigation. FOSS teachers learn how to conduct productive and meaningful discussions, promote collaborative student conversations in integrated curricular areas, and help students express ideas backed by evidence in writing.

Addressing the needs of diverse learners

Teachers learn how to implement strategies that provide access to science learning for all students.

Using technology to make the job easier

FOSS professional learning offers educators a wide variety of digital resources to help prepare for lessons, facilitate class discussions, provide specific enhancements, and manage assessment.

- *eInvestigations Guide*
- Teacher Preparation Videos
- Online Assessment and Reporting
- Student online virtual investigations, tutorials, models, and simulations



The FOSS commitment to science educators is unmatched.

Professional Learning is a key ingredient in the successful implementation of NGSS and any new curriculum program. It is especially vital with an active learning, inquiry-based science program like FOSS. That's why FOSS promotes your success through direct in-person and online professional learning that goes far beyond any other K-8 science curriculum.

Whether you're a new or existing user of FOSS, we'll help you design the optimum mix of virtual and in-person support for your district—including workshops, institutes, and other forums for development of teachers and teacher-leaders. As teachers implement the district's multi-year plan, they will also have the opportunity to incorporate or expand upon subject areas related to district goals in their instruction. These opportunities for expansion include:

- Engineering
- Environmental literacy
- Gathering information through media

“FOSS has provided a scaffolded path for a regular science teacher to improve her instruction and become a role model in science teaching and learning practices. FOSS curriculum and specific labs have turned around my teaching of Grade 4 and Grade 5 science.”

Adriana F., Science Teacher
Virginia

FOSS Critical Pathway makes the most of classroom time for science.

As part of our professional learning support, our FOSS consultants work with district leadership to identify and fulfill district and school goals. One aspect of this support is to determine a *critical pathway* through each module that makes the most efficient use of classroom time for science and reflects the district's educational lens.

The FOSS development team has determined a critical pathway through each module in grades 1-5 that is faithful to the FOSS conceptual framework, yet uses the smallest number of sessions possible to complete the module. This approach is ideal for districts and schools where time is limited, or whose educators are new to FOSS or to NGSS and three-dimensional teaching and learning. This support helps teachers feel confident and comfortable teaching an active science curriculum.

Through a multi-year professional learning plan, our consultants focus on training and supporting teachers through the most critical steps of the investigations. The result is that students get the full benefit of FOSS curriculum, and teachers are confident teaching the material in the time allotted for science. The Critical Pathway is one more way FOSS continuously improves to support educators.

Full Implementation FOSS

150-180
sessions

Critical Pathway

85-100
sessions

The critical pathway approach identifies and teaches the most crucial steps in the module. It honors the conceptual framework of FOSS and engages students in firsthand experiences with phenomena, yet requires fewer class sessions—ideal for schools with limited time for science instruction.

FOSS: A vision fulfilled. Science teaching transformed.

Every student deserves the benefits of science education—not just exposure to scientific phenomena, but the opportunity to understand and explain them. From its foundation, FOSS was built to afford that opportunity to all, regardless of background culture, language, or ability.

The FOSS developers at the Lawrence Hall of Science designed FOSS around the principle of collaborative, active investigation. FOSS effectively engages all students by inviting them to interact with observable phenomena, a teaching philosophy subsequently codified with the arrival of NGSS. FOSS makes science accessible and equitable for every student in every classroom. This active learning philosophy has turned more than two million students and 100,000 teachers into hands-on active investigators of scientific phenomena. FOSS is recognized today by experts and organizations across the country for its proven quality, rigor, support, and effectiveness.

Learn more.

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